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ESTRAND, LONDON" (2 words)

PUBLISHED WEEKLY AT 28 ESSEX ST., STRAND, LONDON, W.C.2

SUBSCRIPTION (WITH
DIARY) 20/- PER ANNUM
SINGLE COPIES 9d.

No. 2642.

SEPTEMBER 27, 1930.

Vol. CXIII.

Co-operative Advertising



The picture for the 1931 Calendar 'Curly Locks' is the eighth of a series on the subjects of well-known Nursery Rhymes and Legends. This picture is a faithful reproduction of the original by the well-known artist Miss Kate Olver. Its delicate colour scheme, enhanced by a beautiful mount, makes it a calendar of irresistible appeal.

The price, 2/6 per dozen, carriage paid, is considerably less than the cost of production.

Three dozen is the minimum quantity that can be overprinted with own name and address.

We can supply envelopes to fit the calendars at 8d. per dozen.
Size of Picture 8½ in. x 6 in.
Size of Calendar 15½ in. x 11½ in.

The "Allenburys" Calendar for 1931

Overprinted with Chemists' Own Name and Address.

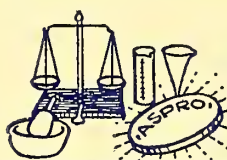
Send your orders early. Stocks were exhausted quickly last year.

Particulars of the Name and Address to be overprinted should accompany each order.

ALLEN & HANBURYS LTD., LONDON, E.2.

Telephone: Bishopsgate 3201 (10 lines).

Telegrams: "Greenburys Edo London."



The 'Aspro' Review



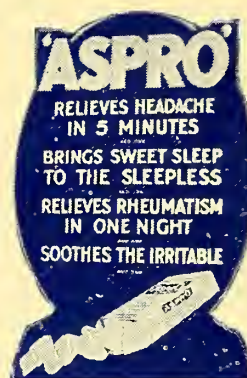
17% Extra Profits.

"British to the Core"

New Series Display Features.

Send COUPON below for this New 'ASPRO' Window Display

Printed in ten colours



By featuring 'ASPRO' Displays in your window you link up your store to the largest Medicine Publicity Campaign in the World

Following the success of our recent Man-Nurse and Child Display for Chemists and the many letters of appreciation received we have pleasure in announcing a new 3-piece series now ready for distribution. These productions combine suggestion and reasons why customers should enter your store to purchase 'ASPRO.' The sooner you co-operate by featuring 'ASPRO' Displays—the greater is your opportunity of benefiting by the consumer demand created by our huge advertising campaign. Be first in the field by showing this new 3-Piece Display. Simply fill in name and address and post to Gollin & Co. Pty., Ltd., "Aspro" Dept., Slough, Bucks. The displays will be despatched to you promptly.

17% Extra through buying 'ASPRO' on Bonus Terms.

The 'ASPRO' bonus on unstamped 'ASPRO' is as follows:— On a one gross order for 10's the bonus is one dozen packets; on half-gross order, ½ dozen packets. Half-gross 10's is the minimum order accepted for Bonus purposes. On a 1 gross order for 27's the bonus is 2 dozen packets, on a half-gross order 1 dozen packets, and on a quarter-gross order ½ dozen packets. A quarter-gross order is the minimum quantity. There is no bonus on 5's or 60's.

The conditions are that the Chemist who buys on these terms undertakes to display 'ASPRO' Advertising matter in his shop window for 14 days, and sell at advertised prices. As 'ASPRO' is so extensively

advertised, this action will not only bring customers into the Chemist's shop to purchase 'ASPRO,' but should enable the chemist's staff to make other sales to these customers. Acceptance of Bonus is considered acceptance of conditions regarding display and selling prices. For Bonuses it is not necessary to buy both sizes at the same time, i.e., single lots 6 dozen 10's or 3 dozen 27's will qualify the Chemist.

You order as follows:—We do not sell direct to the Chemist. All our business goes through Wholesalers. Orders may be sent either to your Wholesaler or direct to us. If to us, state the name of your Wholesaler, so that we may forward the order on and the Bonus will be supplied direct by us.

- Ordinary prices for unstamped 'ASPRO' are as follows:—
- 3d. size (containing 5 tablets) 2/3 doz
 - 6d. " (containing 10 tablets) 4 6 "
 - 1/3 " (containing 27 tablets) 11/6 "
 - 2/6 " (containing 60 tablets) 21/- "
- Less 2½% 30 days.

NOTE.—The 1/3 size contains two extra tablets. 2/6 size ten extra tablets.

'ASPRO' consists of the purest Acetyl Salicylic Acid that has ever been known to Medical Science, and its claims are based on its superiority.

Made by ASPRO LIMITED, SLOUGH, England.

Agents:
GOLLIN & CO. PTY. LTD.
('Aspro' Dept.),
SLOUGH, BUCKS.
Phone: Slough 688.

No proprietary right is claimed in the method of manufacture or the formula.

COUPON for New 3-Piece 'ASPRO' Display.
GOLLIN & Co. Pty. Ltd. ('Aspro' Dept.), Slough, Bucks.
Please send me above displays.
Name.....
Address.....



Ever tried to calculate the business you *win* in comparison to that which *walks* into your Shop?

It is worth thinking about, especially if yours is a personal-business.

The personal touch is a very sound policy in Retail Pharmacy methods, but it must not be overlooked that its point of contact with the Customer is mostly at the Counter.

For that reason—the more personal your business the bigger the need to use your windows to attract new Customers and thereby increase the scope of your influence.

“THE WIGGLESWORTH WAY”

has long enjoyed an enviable reputation for Window Sales.

Add to this a policy of “exclusive rights” in Own Name Packs, and you will realise why many of the most prosperous personal-business advocates throughout the country are our Friends and Clients.

WIGGLESWORTH LTD.

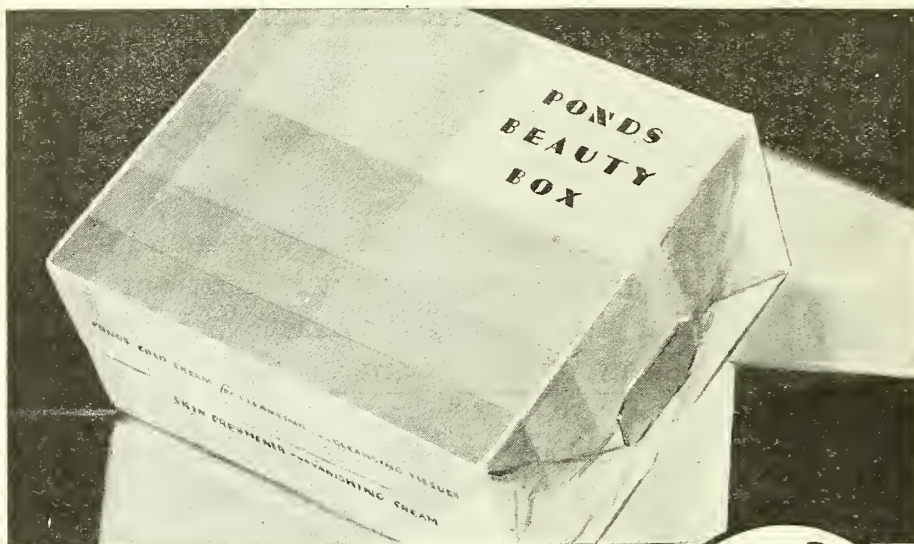
Specialists in Pharmaceutical Packing

WESTHOUGHTON

LANCS.

POND'S

BEAUTY BOX



reduced in price

~~3/-~~
2/6

The reduction in the price of the Pond's Beauty Box from 3/- to 2/6 has been arranged for a time when the approach of Winter is turning the minds of women towards the protection of their complexions. It takes effect on the 1st October, and will be prominently mentioned in Pond's advertisements throughout the country. The Box will be represented not only as an ideal introduction to Pond's Complete Method of Skin Care, but also as being appropriate as a gift. October the First is the day; are your stocks in order?

Write to POND'S EXTRACT CO., 103 St. John Street, London, E.C.1.

THIS REDUCTION TAKES EFFECT
ON THE 1ST.
OCTOBER
1930



THOMAS KEATING
LTD
Station Mills
Billingshurst
Sussex

27th September, 1930.

We desire to inform the Trade that our existing selling arrangements with Messrs. J. C. ENO Ltd. will terminate on the 30th September, 1930.

On and from WEDNESDAY, OCTOBER 1st, 1930, we have appointed as our Selling Agents for England, Wales, Scotland and The Channel Islands :-

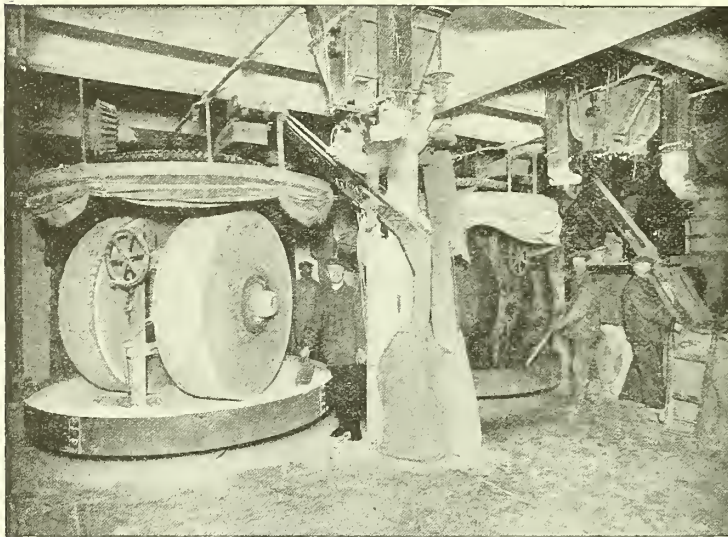
Messrs. Eucryl Ltd.,
Shirley, Southampton.

and for Northern Ireland, The Irish Free State and the Isle of Man :-

Messrs. Harwood Bros. Ltd.,
Belfast — Dublin.

We desire to take this opportunity of thanking the Trade for their much appreciated co-operation. There will be no change in terms or selling prices under the new arrangement.

BUY IN THE BEST MARKET



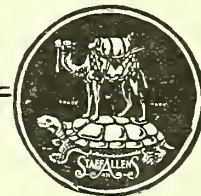
Edge Runners in a StaffAllens Mill

StaffAllens Powdered Drugs have been accepted as the standard quality for nearly a century.

TO unrivalled experience in Drug Grinding, up-to-date plant and skilled labour under scientific supervision must be added to explain the secret of StaffAllens superiority.

YOU will be well advised to send all your enquiries for Powdered Drugs to the "Home of Britain's Drug Milling Industry."

ACACIA
 ALOES
 BELLADONNA
 CAPSICUM
 DIGITALIS
 GENTIAN
 HENNA
 JALAP
 NUX VOMICA
 ORRIS
 RHUBARB
 SENNA
 TRAGACANTH



StaffAllens POWDERED DRUGS

STAFFORD ALLEN & SONS, LTD.
 COWPER STREET, LONDON, E.C.2

INDEX TO ADVERTISERS

Alcock Manfg. Co. (Plasters)	xii	British Thomson-Houston Co., Ltd. (Mazda Lamps)	xxxii	F.D.Z. 674 (Cetyllic Alcohol)	vi
Allen & Hanburys, Ltd. (Allenbury's Calendar, 1931)	Cover	Brown & Son (Stills)	34	Fink, F., & Co. (Gums)	36
Allen, Stafford, & Sons, Ltd. (Powdered Drugs, &c.)	4	Budnip, Ltd. (Powders)	ix	Gardiner & Co. (The Scotch House, Ltd. (Overalls)	xxvi
Amo Safety Razor Blade Co., Ltd.	30	Burman & Sons, Ltd. (Hair Clippers)	24	Gardner, W., & Sons (Glos.), Ltd. (Machinery)	xxviii
Anglo-French Drug Co., Ltd. (Pharmaceutical Preps.)	x	Burrough, J., Ltd. (Alcohol) Leader Page		Gem Automatic Weighing Machine Co., Ltd.	20
Arcos, Ltd. (Santonin)	6	Burroughs Wellcome & Co. (Quinine Salts, &c.)	39	Genoxide, Ltd. (Hydrogen Peroxide)	viii
Arnfield, J. C., & Sons, Ltd. (Raspberry Vinegar)	v	Bussell, T. C. (Bottle Caps)	xxx	George, Ernest J. (Valuer, &c.) Col. Supp.	
Association of Manfg. Chemists, Ltd. Col. Supp.		Caldicot Tin Stamping Works, Ltd. (Decorated Tins)	34	Gollin & Co. Pty., Ltd. (Aspro)	Cover
Auchterlonie, Williams & Co., Ltd. (Bank Loans)	Col. Supp.	Carnegie Bros. (Chemicals, &c.)	ii	Goodall, Backhouse & Co. (Ku-bist Toilet Preps.)	31
Autoway Co. (Weighing Machines)	10	Carter Bros. (Slumber Tea)	36	Gower, John (Books)	Col. Supp.
Ayrton-Graham, Ltd. (Shopfittings)	32	Cartwright, W. B., Ltd. (Moorland Tablets)	9	Grout & Co., Ltd. (Crêpe Bandages)	xxiv
Ayrton, Saunders & Co., Ltd. (Wholesale Druggists)	15	Castle Huskisson, Ltd. (Tablets, &c.)	viii	Grunwald, Firna Heinz	iv
Barker, R., & Son, Ltd. (Infants' Preservative)	xviii	Cavendish Chemical Corporation	xiv	Guest, H. Marcel (Capping Solution)	36
Battle, Hayward & Bower (Seed Dressings)	38	Cellophane Co., Ltd. (Wrapping Material)	xxxii	Guest, T., & Co., Ltd. (Tablets, &c.)	14
Bayer Products, Ltd. (Pharmaceutical Products)	vii	Cephus, Ltd. (Headache Remedy)	xiv	Hackett, S. E. (Film Overstocks)	Col. Supp.
Beatson, Clark & Co., Ltd. (Bottles)	xxx	Chemical Works formerly Sandoz (Alkaloids)	vi	Hall, Forster & Co., Ltd. (Vapourisers)	xxiv
Beecham-Veno Central Distributing Depot	xv	Christy, T., & Co. (Page-Barker Lotion, So-it-is Denture Powder, Cucamel)	20-36-40	Haller Laboratories, Ltd. (Danysz Virus)	38
Bell, John, Hills & Lucas, Ltd. (Pharm. Preps.)	Leader Page	Churchill, J. & A. (Books)	xxvii	Hampshire, F. W., & Co., Ltd. (Snowfire Cream)	22
Benckiser, J. A. (Tartaric Acid, &c.)	vi	Coates & Cooper, Ltd. (Lacto Dextrin)	xx	Harker, C. R., Stagg & Morgan, Ltd. (Petrolax)	xii
Benger's Food, Ltd. (Foods)	40	Cocoa Mills, Wessanen	vi	Harrison, A., & Sons (Printing)	xxv
Bennett, Sons & Shears, Ltd. (Machinery)	xxviii	Constipon Tablets	xviii	Harvey & Co. (Dublin), Ltd. (Veterinary)	38
Berdoe & Fish (Valuers, &c.) Col. Supp.		Corrugated Packing Materials Co., Ltd. (Corrugated Paper Boxes, &c.)	34	Himrod Manfg. Co., Ltd (Asthma Cure)	ix
Betts & Co., Ltd. (Collapsible Tubes)	14	Crookes Laboratories (Cod Liver Oil Emulsion)	ix	Holiday & Co., Ltd. (Ginger Beer Crystals)	xx
Blackie, R. (Spun Ointments)	xviii	Cuxson, Gerrard & Co., Ltd. (Carnation Corn Caps)	xxiv	Hornby & Co. (Hull), Ltd. (Tins)	xxii
Blythe, W., & Co., Ltd. (Chemicals)	ii	Cyona Co., Ltd. (Toilet Soap)	20	Ingram & Royle, Ltd. (Mineral Waters)	xxi
Bob Martin, Ltd. (Martin Milk Dog Food)	12	Davenport, J. T., Ltd. (Chlorodyne)	xi	Jackson, Ernest, & Co., Ltd. (Glossettes, &c.)	13
Box 174/209 (Agencies, &c.) Col. Supp.		Dearborn, Ltd. (Toilet Specialities)	22	Jeffreys, Miller & Co., Ltd. (Malt Extract)	xvii
Box, W. H. (Box's Pills)	xii	Demuth, R. (Frozoclone, &c.)	18	Johnson & Sons Mfg. Chemists, Ltd. (Emulsions, &c.)	iii
Bradbury & Co. (Iodized Iodine)	x	Dubarry et Cie (Face Powder)	Cover	Josephs, Philip, & Sons, Ltd. (Shop-fittings)	34-Col. Supp.
Brierley, John (Valuer, &c.)	Col. Supp.	Dudley & Co., Ltd. (Window Display Sets)	xxvi		
Bristol-Myers Co. (Sal Hepatica)	Leader Page	Edwards Harlene, Ltd. (Toilet Preps.)	21		
Bristow, T. F., & Co., Ltd. (Toilet Preps.)	29	Evans, Adlard & Co., Ltd. (Filter Papers)	xxviii		
British Boards for Boxes and Cartons	xxv	Fairchild Bros. & Foster (Panopticon)	Leader Page		
		Fassett & Johnson, Ltd. (Saltrates, Bemax, &c.)	33-31x		

(Continued overleaf.)

For VARICOSE VEINS

and the whole group of troubles attributed to **Relaxed Conditions** of the tissues.

"ELASTO" is a scientifically prepared cell food—NOT A DRUG—and may be introduced with every confidence of extensive recommendation.

Recommend "ELASTO" for Varicose Veins, Ulcers, Eczema, Swollen Legs, Phlebitis, Thrombosis, Muscular Weakness, Bad Legs, Piles, Pro-lapsus, Varicocele, Hardened Arteries, Blood Pressure, Deficient Circulation and kindred ailments.

One size only (a month's treatment), 5/-; per doz., 45/- from your wholesaler.



Gets at the Cause

Prepared in the Laboratories of
THE NEW ERA TREATMENT CO.
CECIL HOUSE, HOLBORN VIADUCT,
LONDON, E.C.

Full particulars, Showcards, and Leaflets on request.

INDEX—cont.

Keating, T., Ltd. (New Selling Agents)	3	Oppenheimer, Son & Co., Ltd. (Roboleine)	8	Stokes, C. A., & Co., Ltd. (Ointments)	Leader Page
Kent, G. B., & Sons, Ltd. (Brushes)	32	Orridge & Co. (Valuers, &c.) .. Col. Supp.		Sturge, J. & E., Ltd. (Precipitated Chalk)	iv
Kerfoot, T., & Co., Ltd. (Black Currant and Glycerine Pastilles) ..	17	Parkinsons, Ltd. (Kilkof) .. Leader Page		Sumner's Typhoo Tea, Ltd. Leader Page	
King, J. C., Ltd. (Display Stands) ..	38	Perry's Powders, Ltd.	x	Superfine Chemicals, Ltd. (Bath Salts)	56
Lax & Shaw, Ltd. (Bottles)	xxx1	Phosferine (Ashton & Parsons, Ltd.) xxxv		Tatcho Laboratories (Hair Preps.) ..	56
Lee, R. (Manicure Requisites)	22	Pitman, Sir Isaac, & Sons, Ltd. (Books)	xxvi	Teasdale's Chlorodyne Co. (Phelps Brow's Herbal Remedies) ..	36
Lemoine, G. (Jean Patou Perfumes) ..	25	Pond's Extract Co. (Price Reduction) 2		Temmah Products, Ltd. (Blades)	20
LePersonne, L., & Co. (Glass Bottles and Jars)	xxx1	Potter & Clarke, Ltd. (Wholesale Druggists)	37	Thompson & Capper Wholesale, Ltd. (Tablets)	35
Lewis, H. K., & Co., Ltd. (Books, &c.)	xxvi	Poulton, Selfe & Co. (Glassware)	xxx	Thornton & Ross, Ltd. (Zoflora Disinfectant)	xi
Leyland & Birmingham Rubber Co., Ltd. (Breast Reliever)	xxii	Prescriber, The	ix	Tibbury, W. R., & Son (Tooth Brushes) ..	32
Lincoln & Midland Counties Drug Co., Ltd. (Clarke's Blood Mixture) xvi		Prichard & Constance (Manifg.), Ltd. (Manicure Bonus Offer)	19	Tomlinson, R., & Son (Shopfittings) ..	56
Liverpool School of Pharmacy	xxvii	Prideaux's, Ltd. (Dried Milk)	xviii	Tomlinson, T., & Son (Valuer, &c.) ..	Col. Supp.
Lloyd, Aimee, & Co., Ltd. (Euxesis) ..	24	Proprietary Agencies, Ltd. (Milk of Magnesia)	40	Toogood, Wm., Ltd. (Medicinal Sprays)	25
London Capsule Co. ("Adaptocaps") ..	xxxiv	Riley, J., & Sons, Ltd. (Hypo)	v	Town Talk Polish Co. (Polishing Cloths, &c.)	xxxiv
London College of Pharmacy	xxvii	Rivista Italiana delle Essenze e Profumi	xvi	Treble & Co. (Shopfittings)	56
London Essence Co., Ltd. (Olive Oil) 1		Robinson & Sons, Ltd. (Boxes, Cartons, &c.)	32-xxix	Tycecaps, Ltd. (Bottle Caps)	xxx1
McClure, Young & Co., Ltd. (Vaposan)	viii	Rosmarie Mfg. Co. (Petal Dust)	24	Tyrer, P., & Co., Ltd. (Chemicals) ..	iii
McGuffie, J., & Co. (Dog Powders) ..	56	Roura & Forgas (Quicksilver)	iii	United Chemists' Association, Ltd. (Throat Lozenges)	xiii
Martin, Bob, Ltd. (Martin Milk Dog, &c., Food)	12	Rowland, A., & Sons, Ltd. (Macassar Oil)	24	Van der Hoeke, Ltd. (Glass Vials) xxxiv	
Mason Pearson Selling Agency, Ltd. 16		Rudduck & Co. (Shopfittings) ..	xxix-Col. Supp.	Viscose Development Co., Ltd. (Bottle Capping)	xxx
Mathews, D., & Sons (Shopfittings) xxii		Rutherford, J., & Co., Ltd. (Toilet Rolls)	xxiii	Wanie Distributing Co. (Blades)	22
Mathews Laboratories, Ltd. (Digitalis)	Leader Page	Saint Raphael Cie (Tonic Wine) ..	xx	Warne, W., & Co., Ltd. (Surgical Goods)	xxii
Maud, F., & Berg, E., Ltd. (Showcases)	56-Col. Supp.	Sangers, Ltd. (Nildé Compacts)	50	Westminster College of Pharmacy ..	xxvii
Maw, S., Son & Sons, Ltd.	11	Schutze, F., & Co., Ltd. (Baby Pacifiers)	xxiv	Wheeler & Huisking, Ltd. (Botanical Drugs, &c.)	vii
May, Roberts & Co., Ltd. (Sundries) 7		Scruton, O., & Co. (Nurse Harvey's Mixture)	32	White, A., & Sons, Ltd. (Chemicals) ..	ii
Metropolitan-Vickers Electrical Co., Ltd. (Cosmos Lamps)	xxxii	Scurr, C. A. (Optical Tuition) 25-26-27-28		White, J. F., & Co. (Kompo)	xx
Midgley & Parkinson, Ltd. (Yeast Preps.)	xviii	Shadeine Co. (Hair Dyes)	56	Wigglesworth, Ltd. (Packed Goods) ..	1
Mulford, H. K., Co., Ltd. (B.F.I.) ..	xiv	Shaw, J., & Sons (Wolverhampton), Ltd. (Electric Outfits)	xxiv	Willows, Francis, Butler & Thompson, Ltd. (Chemical Food)	x
Mundet Cork Products, Ltd.	xxxiv	Shawyer, A. J., & Co. (Postcard Enlargements)	xxvii	Wood Bros. Glass Co., Ltd. (Glassware)	xxxvi
Munns Bros., Ltd. (D. & P. Service) xxvi		Smith, Lewis (Dog Medicines)	56	Wright, John, & Co. (Gas Radiators) ..	xxxiii
Myatt, W. J., & Co., Ltd. (Myatt Blades)	50	Smith, Martin H., Co. (Ergoapiol) ..	ix	Wright, Layman & Umney, Ltd. (Packed Pharmaceuticals)	Cover
Mysore, Trade Commissioner for, in London (Sandalwood Oil)	16	Smith, T. & H., Ltd. (Chemicals) ..	v	Wrigley, Paterson & Co., Ltd. ("Superlin" Disinfectants)	vi
National Association of Opticians ..	xxvi	Solazzi (Liquorice)	iv	Yadil Products (1925), Ltd. (Antiseptic)	x
Newball & Mason (Extract of Herbs, &c.)	xx	Solport Bros., Ltd. (Hot Water Bottle Covers)	xxiii	Zeal, G. H., Ltd. (Clinicals)	xxiii
New Era Treatment Co. ("Elasto") 5		Speer, W. R., & Son (Toothbrushes) 50			
		Sterns, Ltd. (Oils, Petroleum, &c.) xxviii			

Santonin, B.P.

The truest Specific known to Medical Science

Supplied in Bulk and Packed Doses for Human and Veterinary Use

Order from your wholesaler



Packet Prices

No. 0.	6 × 1/2	Grain	- 1/-
No. 1.	6 × 1	"	- 1/6
No. 2.	6 × 2	"	- 2/3
No. 3.	6 × 3	"	- 3/-
No. 4.	6 × 4	"	- 4/-
No. 5.	6 × 5	"	- 4/9

The Guide to the Canine Trade

“THE DOG LOVERS’ BOOK”

Contains NEW SCIENTIFIC information on the Ailments of the dog and their treatment. It will surely attract a profitable Canine Trade and it is

FREE TO CHEMISTS !!

Write to-day for a FREE supply to distribute to your customers

ARCOS LTD., Santonin Dept., Bush House, Aldwych, LONDON

Sole Representatives of the Tchimkent Santonin Factory

HAVE YOU
RECEIVED
PARTICULARS
OF



"A SQUARE OFFER"

IF NOT, WRITE
FOR DETAILS

IT WILL SAVE
YOU MONEY

MAY, ROBERTS & CO., LTD.
7-13 Clerkenwell Road, LONDON, E.C.1

Roboleine
THE FOOD THAT BUILDS THE BODY

AUTUMN IS HERE. WINTER IS AT HAND;
TIMES WHEN EVERYONE NEEDS ROBOLEINE.

SPECIAL WINDOW DISPLAY OFFER

IF YOU ARE NOT STOCKED
WRITE FOR TERMS TO
OPPENHEIMER SON & Co., Ltd.,
HANDFORTH LABORATORIES,
CLAPHAM ROAD,
LONDON, S.W.9



YOU MAY WANT TO

Buy a Business, Sell a
Business, Secure an Agency,
Engage an Assistant, Procure
a Situation, or Sell Odd Lots
of Chemists' Requisites

If so, you can do it quickly and
satisfactorily by an advertisement in

THE CHEMIST & DRUGGIST SUPPLEMENT

This is the Tariff:

**Businesses Wanted and for Disposal,
Premises to Let, Goods for Sale, and
Agencies; 6/- for 50 words; every additional
10 words or less, 6d.**

**SITUATIONS OPEN: 6/- for 40 words;
every additional 10 words or less, 6d.**

**SITUATIONS WANTED: 2/- for 18 words;
every additional 10 words or less, 6d.**

Legal Notices, Tenders, Auctions, and
all specially spaced announcements, **1/3** per
nonpareil line (12 lines=1 inch single column).

Miscellaneous (Wholesalers') Section,
for odd and second-hand lots; **10/- for 60 words;**
1/- for every additional 10 words or less.

EXCHANGE COLUMN (for Retailers, etc.).
Twopence per word, minimum **2/-**

BOX NUMBER.

In each case replies may be addressed to a registered
number or non-de-plume, c/o this Office, **at a
charge of 1/- extra** for each advertisement.

Address all communications to
**THE PUBLISHER, THE CHEMIST AND
DRUGGIST, 28 Essex Street, London, W.C.2.**

Telegrams: "Chemicus, Estrand, London" (2 words).
Telephone: Central 6565 (8 lines).

FACTS!

Moorland business IS booming!

Moorland Sales ARE soaring!

More Wholesalers and More Retailers are placing more and Larger orders—and increasing numbers of customers are buying more and more Moorlands than has ever been bought, sold and taken in this country before

No asset is greater than public goodwill, and the secret of Moorlands success is the entire satisfaction that every tablet gives to the consumer—YOUR customer. You can turn all that Moorland stands for to personal account by associating YOUR name with such a product.

Link up YOUR Pharmacy with the big

MOORLAND PRESS ADVERTISING

Let the public SEE Moorland Brand Indigestion Tablets
in YOUR window—then you are SURE to make money

Heaps of showmatter with every order

Warning

It has just come to our knowledge that representatives of certain of our competitors have, either with or without the knowledge of their principals, in order to effect a sale of personal weighing machines, made representations calculated to mislead purchasers, such as statements that their machines were substantially the same as those manufactured by us, and that this Company had ceased to exist as a private concern and been absorbed by the Company they represent, and have thereby fraudulently induced the public to purchase machines in the belief that such machines were manufactured by us. Appropriate Court proceedings are pending at the instance of two of our customers to whom such false representations have been made, and notice is hereby given that Court proceedings will be taken by us should such misrepresentations come to our knowledge. We would remind the public that we are the Pioneers of the modern attractive personal weighing machines which not only add an air of distinction to all first-class Pharmacies, but prove very profitable investments, and that all machines manufactured by us bear our mark "Autoway-Barometer of Health."

Always at your service,

THE AUTOWAY COMPANY

September, 1930

LONDON

13 Wellington Street
GLASGOW, C.2

— MANCHESTER

MAW'S FOODS SUNDRIES



S. Maw, Son & Sons, Ltd.,
Aldersgate St., London,
and Barnet.

TRADE MARK



NOW available
for retail
★ **NEW BUSINESS**
with
★ **NEW PROFITS**



MARTINMILK, a superior milk food for dogs, puppies and cats, made by the makers of Bob Martin's Condition Powders, is now packed in 1/8d. size tins, and brought within the reach of every dog owner.

After many years' consistent advertising of Bob Martin's Condition Powders, dog owners have been educated up to a point where they can appreciate the importance of a proper milk food as part of their dog's everyday diet. Consequently, MartinMilk is now made available for retail in a convenient size tin. The business which you will do in MartinMilk will be almost entirely new business. Fanciers and Breeders will, of course, be ready buyers, but the biggest demand will come from the people who are already coming to you for Bob Martin's Condition Powders.



This display stand holds one tin of MartinMilk and measures under eight inches. One is included with every dozen MartinMilk.

MARTINMILK
Retails at
1/8
Trade
15/6
per doz.

WITH regard to the quality of MartinMilk, you will be interested in these extracts from letters from two famous Breeders.

“I have tried MartinMilk and find it so easy to mix, and so free from lumpiness so common to most patent milk foods, that it is a positive joy to use. I had used several other kinds of milk foods, but the pups had continual Diarrhœa, which mystified us quite a lot; after the second bowl of MartinMilk, however, this had completely disappeared, and they are now quite fit and in the best of condition.”

“I use MartinMilk and find it easy to prepare and much appreciated by the puppies It seems so much more readily made, not going into lumps like many of these milk foods, and it suits the puppies extremely well.”

MartinMilk retails at 1/8d. Trade, 15/6d. per dozen.

A very extensive range of Bob Martin display material is at your service, including Display Screens, Counter Cards, etc., which your Wholesale House cannot conveniently pack with goods. If you will make direct application to Southport for display material your requirements will be supplied by return mail.

BOB MARTIN LTD.

Makers of Dog Foods and Medicines since 1892
SOUTHPORT, ENG.

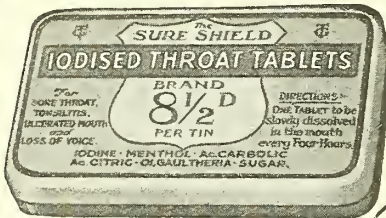


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THE SURE SHIELD



IODISED THROAT TABLETS



8½d. Tins
 5/6 per doz. 63/- per gross

1s. 3d. Tins
 9/6 per doz. 108/- per gross

THOS. GUEST & CO., LTD., CARRUTHERS STREET,
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We have minimised production costs by equipping our Works with the most up-to-date machinery.

These Tubes are of the highest quality and finish combined with as low prices as any house in the Trade.



Samples and Quotations on request.

Best Service and Delivery.

ESTABLISHED 1857

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STILL PLENTY OF PROFIT IN CHEMISTS' REMEDIES

COUGH MIXTURES FOR EXAMPLE

**IN GREAT VARIETY—PERFECTLY PACKED PRODUCTS
PRESENTED IN AYRTON'S INIMITABLE STYLES.**

Prices quoted are "per dozen." Special reductions for larger quantities and for season's contracts. **Own Name on all Products.**

BLACK CURRANT COUGH ELIXIR

A fine reputation and popular with children

Cartoned ..	2 oz.	5/6	..	4 oz.	8/0
Uncartoned ..	2 oz.	4/6	..	4 oz.	7/0

CHERRY COUGH SYRUP (Children)

Effective with very attractive appearance and taste

Cartoned ..	2 oz.	5/3	..	4 oz.	7/6
Uncartoned ..	2 oz.	4/3	..	4 oz.	6/6

CHERRY COUGH LINCTUS (Adults)

A very efficient compound for neglected coughs

Cartoned ..	2 oz.	5/3	..	4 oz.	7/6
Uncartoned ..	2 oz.	4/3	..	4 oz.	6/6

WILD CHERRY COUGH MIXTURE (Adults)

Pronounced anti-spasmodic and slightly narcotic

Cartoned ..	2 oz.	6/3	..	4 oz.	9/0
Uncartoned ..	2 oz.	5/3	..	4 oz.	8/0

GLYCERINE, HONEY AND LEMON

A specially fine product which has grown enormously in public estimation

Uncartoned Ayrton Oval	oz.	3	6/3	oz.	4	7/0	oz.	6	8/6
Uncartoned Panels ..		2½	5/9		5	7/9		—	

Specimen pack sent to any Trading Chemist

LINSEED, HOREHOUND AND HONEY

The biggest seller in the country. Should be regularly featured in the window. Contract terms on application

	oz.	2	5/6	oz.	3	6/6	oz.	4	7/6	oz.	6	9/0
Cartoned ..												
Uncartoned ..		2	4/6		3	5/6		4	6/6		6	8/0

LUNG TONIC

For Deep-seated and long-standing Lung and Bronchial Coughs

Cartoned ..	2 oz.	5/6	..	4 oz.	7/6
Uncartoned ..	2 oz.	5/0	..	4 oz.	7/0

PINE CONCENTRATE

For those who are attracted by a home-made Cough Mixture. Full directions for making

Cartoned	1 oz.	6/6
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PINE MINT SYRUP

Popular and Palatable

Wrapped style only	4 oz.	8/6	..	8 oz.	12/6
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WHOOPIING COUGH MIXTURE

Long and worthy reputation

Uncartoned only	2 oz.	5/6	..	4 oz.	7/6
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AYRTON'S - - LIVERPOOL, ENG.

MYSORE GOVERNMENT SANDALWOOD OIL

DISTILLED FROM SANTALUM ALBUM, LINN.

This Mark is the



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**Trade Commissioner for Mysore in London
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WE are now making a new size "MASON PEARSON" to sell at the popular low price of 4/9. It is an ideal size for general family use, and will quickly create big sales. We have named it "Small Universal."

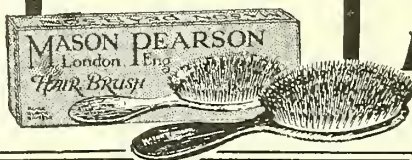
Make a good window display of them. It will repay itself many times over.

Subject to the same generous Trade Discounts as other models.

Write us for any Window Display matter you want.

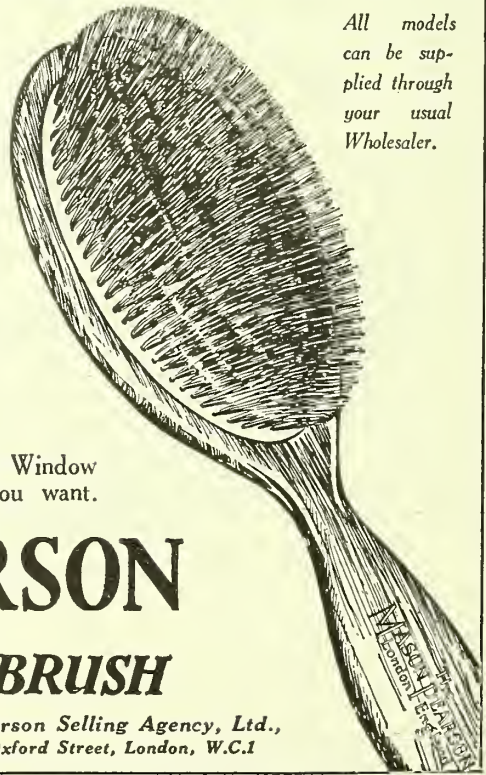
MASON PEARSON

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*All models
can be sup-
plied through
your usual
Wholesaler.*





EMULSION BLACK CURRANT and GLYCERINE PASTILLES

WHEN you sell these Pastilles you can guarantee that they contain the entire medicinal qualities of Black Currant Juice, with all its natural flavour. The juice is extracted by a special process which preserves its delightful and quite inimitable "tang" and every pastille is as full of fruit as is pharmaceutically possible.

Your customers will be able to recognise this for themselves from the first taste and they will tell others, as is ever the way with articles of first-class quality. "Emulsion" Black Currant and Glycerine Pastilles only need introduction, they will make headway on their own merits. They are certainly one of the most profitable lines to which you can devote your interest.

A striking Window Display is now available
Illustration and full particulars on request

To EXPORT BUYERS—All orders and enquiries should be addressed to our Sole Export Agents
Wm. ALFRED JONES Ltd., West India House, Liverpool

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ESTABLISHED 1797.

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Frozoclone
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The Original Solid Eau de Cologne

TWO SIZES. P.A.T.A. Retail 3/6 and 2/-
per doz. 32/- 18/-

WARNING:

Imitations have been produced under a similar name and style of packing, closely resembling Frozoclone in outward appearance only, with the object of misleading the public. Proceedings have been taken and always will be rigorously pursued against all such imitations.

Solid English Lavender *In Wedgwood Blue Frosted Bottles.*
Sizes and Prices as Frozoclone

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Cuticle Remover and Nail Cleanser ,, 1/9, ,, ,, 14/-

HARMOZAN *Effervescent Pine Needle Extract Bath Squares* IN TWO SIZES P.A.T.A. 3/9 & 2/-
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P.A.T.A. Retail 2/3, per doz. 21/-

RISICCOL *Demuth's Castor Oil Powder, Most Effective, Absolutely Odourless and Tasteless—and other Medicinal Oils in powder form* P.A.T.A.

MUTHOL *The original Paraffinum Liquidum B.P. in solid Emulsion. Packed in reputed 1-lb. jars. In three flavours: Raspberry, Orange, Lemon* P.A.T.A.

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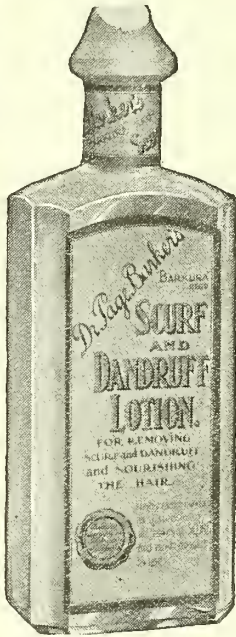
OCTOBER 1st TO NOVEMBER 15th

There's money in Amami Manicure requisites . . . quick, easy money that you can't afford to miss. Send to-day for one of these two generous Bonus Parcels. Remember that this attractive offer is available for a limited period only and **ORDER NOW FOR THE CHRISTMAS TRADE.**

MANICURE BONUS PARCEL .. A		
	Cost Price	Selling Price
1 doz. 6d miniature Manicure Sets at 4/- dz	4 0	6 0
1½ dozen 6d Nail Polishing Stones at 4/- dz	6 0	9 0
½ dozen 1/9 Manicure Sets at 14/- dz	7 0	10 6
1 only 3/6 Manicure Sets at 28/- dz	2 4	3 6
½ dozen 1/- Nail Varnish at 8/- dz	4 0	6 0
¼ dozen 1/- Cuticle Fluid at 8/- dz	2 0	3 0
2 only 1/- Hand Cream at 8/- dz	1 4	2 0
1 only 1/- Cuticle Cream at 8/- dz	0 8	1 0
	£1 7 4	
8 only 6d Manicure (Miniature) Sets at 4/- dz	FREE	4 0
	£1 7 4	£2 5 0
Less 10% Window Display Allowance	2 9	
	£1 4 7	£2 5 0
NET PROFIT	£1.0.5 . . . 83%	

MANICURE BONUS PARCEL .. B		
	Cost Price	Selling Price
2 doz. 6d Miniature Manicure Sets at 4/- dz	8 0	12 0
2 dozen 6d Nail Polishing Stones at 4/- dz	8 0	12 0
½ dozen 1/9 Manicure Sets at 14/- dz	7 0	10 6
2 only 3/6 Manicure Sets at 28/- dz	4 8	7 0
1 dozen 1/- Nail Varnish at 8/- dz	8 0	12 0
½ dozen 1/- Cuticle Fluid at 8/- dz	4 0	6 0
2 only 1/- Hand Cream at 8/- dz	1 4	2 0
	£2 1 0	
¼ dozen Cuticle Cream ...	FREE	3 0
½ dozen 6d Miniature Manicure Sets	FREE	3 0
	£2 1 0	£3 7 6
Less 10% Window Display Allowance	4 1	
	£1 16 11	£3 7 6
NET PROFIT	£1.10.7 . . . 83%	

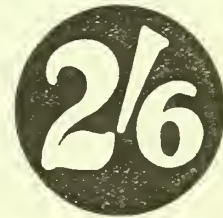
From your usual Wholesaler or direct from Prichard & Constance (Mfg.) Ltd., 11, Broad Street, W.C.1



Dr. Page-Barker's Scurf & Dandruff LOTION

The recognised
specific for scurf

EVERY bottle of Dr. Page-Barker's Scurf Lotion bears a positive guarantee that it will eradicate scurf or the purchase price will be refunded. This makes it the easiest to sell of all hair and scalp specifics. And the profit is handsome.



P.A.T.A.

PER 18/- DOZEN

SEE OUR NEW & ARTISTIC SHOWCARDS

WRITE FOR EXPORT TERMS

With every order for 3 dozen you get three 2/6 bottles as bonus, handsome metal showstand, and attractive showcards.

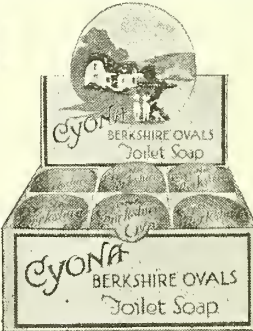
THOS. CHRISTY & CO., 4-12 OLD SWAN LANE, LONDON, E.C.4

A NEW Toilet Soap of Particular Purity

which shows you a profit of over 86% on outlay

BERKSHIRE OVALS

High Fatty acid content.
Pure white.
Berkshire Lavender Perfume.
Each tablet wrapped transparent paper.
Boxed in beautiful patented show outers, printed in 7 colours.
A Soap exclusive to Chemists only.



EXAMPLE OF ORDER.

	Cost	Retails at 3/6d. per tablet
1 gross tablets	24/0	42/0
1 doz. tabs. bonus	—	3/6
Total	24/0	45/6

A profit of 21/6 on an outlay of 24/-

Send a post-card for your gross to-day, direct to Didcot, or through your usual Wholesaler.

Made only by

CYONA CO. Ltd.
DIDCOT SOAP WORKS
DIDCOT - - BERKS.



Let the "GEM"
make money for you

Write for particulars and name of local agent to the manufacturers:—

THE GEM
AUTOMATIC WEIGHING
MACHINE COMPANY
LIMITED
46 NEW CITY ROAD
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To-day's most popular
SAFETY RAZOR BLADE
TO FIT ALL 3-PRONGED HOLDERS

Compare with other makes **THE PROFITS YOU EARN** on these terms:—

15s. Per Gross, less 10% Discount

CASH WITH ORDER OR C.O.D.
PLUS BONUS OF 2 DOZ. PER GROSS.

Orders executed on S/R basis nett.

TEMMAH PRODUCTS, LTD.

14-16 LOWER CLAPTON ROAD, LONDON, E.5.

Creating a
DEMAND
for
“Junofloris”
TOILET AIDS!

Thousands of Advertisements Every Day!

WE are creating a demand for our “Junofloris” range of Toilet Aids, with new additions, amongst all purchasers of “HARLENE” Preparations by means of the Literature packed with

all our other goods. Thousands of Satisfied “Harlene” enthusiasts read about them every day—each Customer for any “Harlene” Product is also a potential Customer for “Junofloris” Toilet Aids

Popular Prices — Good Profits

The profit is very generous and the series comprises:—

“JUNOFLORES”	Prices—Retail
Spring Breath Tablets ..	7½d.
“ “ “ “ ..	1/1½
“ “ “ “ ..	3/-
“ “ Dentifrice ..	7½d.
“ “ “ “ ..	1/1½

“JUNOFLORES”	Prices—Retail
Effervescent Mouth Wash Tablets ..	7½d.
“ “ “ “ ..	1/1½
Skin and Complexion “ Cream	1/3
Vanishing Cream ..	1/3

SELLING TO SATISFIED CUSTOMERS!

“Junofloris” Toilet Aids thus appeal to the most fruitful of all fields—actual satisfied Customers of your own!

WRITE FOR TERMS AND MEET THE DEMAND BY INCLUDING A SMALL QUANTITY IN YOUR NEXT ORDER FOR “HARLENE” PREPARATIONS.

Edwards Harlene Ltd.
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MERCOLIZED WAX

— : for the Complexion : —

and

STALLAX

— : a Shampoo : —

TWO substantial and well-advertised lines which show a handsome profit to the Retailer, and, moreover, may be stocked fearlessly owing to the Manufacturers' most liberal Sale or Return Guarantee.

Both are obtainable in two sizes, and their reputation and sterling value assure a steady turnover.

Order through your Wholesaler, or direct from:

DEARBORN (1923) LIMITED

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Telephone - - - HOLBORN 9669

Everybody's using it now!

Snowfire Cream has gone from success to success. Thousands of women to-day rely on this pure, non-greasy vanishing cream as a skin-protector and beautifier. Its name and reputation, backed by consistent advertising, has made Snowfire the leader among popular priced face creams.

Snowfire CREAM

In Opal Jars and Aluminium hand-bag containers at 1/3 and 3d. respectively (retail).

Manufactured by
F. W. Hampshire & Co.
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Sunnydale Works, Derby.



IF IT
SHAVES
IT'S
WANIE

The Blade that SELLS as it SHAVES—
"LIKE GREASED LIGHTNING!"

Obtainable from all leading Wholesalers.

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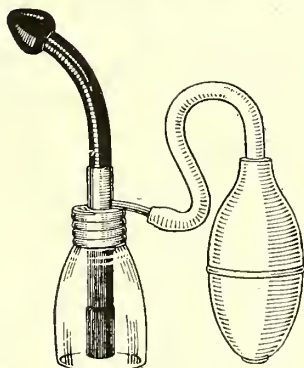
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SPRAYS
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**77 SOUTHWARK STREET
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**JEAN PATOU
P A R F U M E U R
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warns his exclusive clientele that Perfumes produced in imitation of the well-known

JEAN PATOU CREATIONS are being offered in England but not made by

JEAN PATOU

Only the Perfumes
"amour amour"
"adieu sagesse"
"que sais-je?"
"le sien"

in the original black and gold pack are the genuine manufacture of

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A. S. LLOYD'S EUX-E-SIS.

For Shaving
without
Soap, Water,
or Brush.

CAUTION.

The Labels on GENUINE EUXESIS bear
two signatures—A. S. Lloyd, in black
ink, and that of his Widow, Aimee
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Tubes 1/6 & 3/- \approx 33 $\frac{1}{3}$ % Profit

Sole Manufacturers
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AIMÉE LLOYD & Co., Ltd.
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N.B.—When ordering from Wholesale Houses write LLOYD'S EUXESIS (WIDOW'S).

*If its
Customers
you want*

YOU SHOULD STOCK

PETAL DUST

*"Wherein the subtle savour of the Flowers
sublimely dwells."*

THE GREAT FLORAL AIR PURIFIER

A TRIAL WILL CONVINCe YOU THAT—

PETAL DUST, when once shown, creates its own demand, and is therefore a valuable adjunct to every "go-ahead" store.

PETAL DUST, when displayed prominently upon your counter, will attract prudent customers by the fragrance of its unique odour, which to-day is of such universal admiration.

RETAILS IN PACKETS AT 4d. AND 8d. EACH.

Attractive Advertising matter free on request.

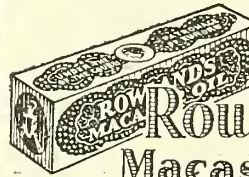
Obtainable through all the usual Wholesale Houses or from
Sole Producers:—

THE ROSMARINE MANUFACTURING CO.
LONDON, S.E.1

For 137 years

Rowland's Macassar Oil has been a favourite dressing for the hair. It keeps the hair healthy, and prevents the encroachment of greyness and baldness.

Of all Wholesalers.



Rowland's
Macassar Oil

RETAIL
3/6, 7/- & 10/6
P.A.T.A.

Red for
dark hair
Golden
for fair or
grey hair

A. ROWLAND & SONS, Ltd., 112 Guilford St., London, W.C.1

HAIR

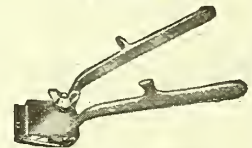
The British-Made
Hair Clipper.

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For SURGICAL
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PURPOSES.

HAIRDRESSERS' CLIPPERS



Dainty Shingling
Clippers for
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Telephone: 0961 BARNET.

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M.P.S., F.S.M.C., F.B.O.A., F.I.O., F.N.A.O., B.Sc., F.C.O.

COMPLETE COURSES OF TUITION for the
 QUALIFYING OPTICAL EXAMINATIONS
 for the SIGHT-TESTING DIPLOMAS of the
 Worshipful Company of Spectacle Makers (F.S.M.C.)
 The British Optical Association (F.B.O.A.) :: ::
 And The National Association of Opticians (F.N.A.O.)



F.I.O.



F.C.O.



F.N.A.O.

50, HIGH STREET, BARNET,
 LONDON, N.

OPTICAL QUALIFICATION.

Dear Sir,

Pharmacists who have adopted sight-testing as an adjunct to pharmacy find it an appropriate, interesting and profitable form of practice. The pharmacist, by reason of his scientific and technical training, is peculiarly qualified to learn the principles and apply the technique of sight-testing, and to practise it efficiently alike to his own advantage and that of the public.

Should you be desirous of acquiring an optical qualification, I could prepare you for any of the examinations described in these pages within a comparatively short while and in the minimum of spare time; moreover, you would find the course of reading very interesting, whilst it would not entail any interference whatever with business. By commencing the course now you would be able to take examination in about six months' time, and an average of about eight or ten hours weekly of your time is all that would be involved. Optical work is now in active operation as an additional N.H.I. benefit; there is plenty of scope in this direction. As a Qualified Optician, you would become registered and placed upon the Panel for Sight-Testing and Optical Treatment work under the National Health Insurance Acts.

If you are interested, kindly write your name upon the form on the back page and post same, when I will be very pleased to send you a syllabus which gives full details of the examinations and my courses of preparation, and any other information you would like.

Yours faithfully,

B B

The Courses of Tuition

for the **Sight-testing Diplomas of THE SPECTACLE MAKERS' COMPANY (F.S.M.C.) THE BRITISH OPTICAL ASSOCIATION (F.B.O.A.); and of THE NATIONAL ASSOCIATION OF OPTICIANS (F.N.A.O.)** are arranged in an up-to-date and systematic manner, and they are constructed in accordance with the syllabuses of these Optical bodies.

The Courses are specially suited to those Pharmacists who wish to gain a recognised Diploma in Optics without the necessity of giving up business to devote to full-time study. The tuition is **complete** and covers the whole work, both Theoretical and Practical, to meet the requirements of these examinations. Special attention is given to the **Practical Work**, and the notes, etc., provided in the lessons for this portion of the work are uniquely arranged and consist of lucid and detailed instructions for the guidance of the Pharmacist so that he can do same at home really quite easily and without any difficulty whatever.

The **systematic arrangement and lucidity** of the lessons ensures that the study is made as simple as possible.

PERSONAL GUIDANCE and INTEREST are assured to a Pharmacist who takes up the Course.

Supplementary Personal Tuition and Practical Demonstration, Etc.

The Courses as outlined above provide absolutely complete and systematic preparation for the Examinations. To supplement the work by correspondence I am very pleased to see a Pharmacist at any time during the Course to demonstrate practical and other points in preparation for the Examination; this may be done just prior to the Examination and is usually most convenient for Provincial Pharmacists who come to London for Examination. During Examination times and just prior to the commencement of an Examination, I hold classes for the personal demonstration of the practical work of the Examination.

Enrolment and Duration of the Courses.

The Courses are so arranged that a student **may commence at any time**; whilst the duration of the Course is adapted to meet the requirement of each Pharmacist, there being no fixed period; but a Pharmacist usually takes about six months to complete the Course and qualify.

The Examinations.

The **S.M.C. Examination** takes place in London twice yearly, in June and November; the **B.O.A. Examination** is held in London in May and November, and also at Provincial Centres (Manchester, Glasgow, Edinburgh, Belfast, etc.).

The **N.A.O. Examination** takes place twice yearly, in January and July, at different Centres (London, Birmingham, Liverpool, etc.).

The **S.M.C. EXAMINATION** consists of:—

(1). **THE PRELIMINARY Division.**

- (a) **Measurement of Lenses and Prisms upon the Optical Bench.**
- (b) **Viva-voce Examination in General and Practical Optics.**
- (c) **Written Examination in General and Practical Optics.**
- (d) **Neutralisation and Analysis of Lenses, etc.**

(2). **THE FINAL Division.**

- (e) **Measurement by rule of face for Spectacles, etc.**
- (f) **Viva-voce Examination in Visual Optics.**
- (g) **Written Examination in Visual Optics.**
- (h) **Practical Examination in Adaptation of Lenses to correct Errors of Vision.**

(3). **THE SUPPLEMENTAL EXAMINATION IN DISEASES OF THE EYE.**

The **Preliminary Division** may be taken by Candidates over 17 years of age, and the **Final Division** may be taken by Candidates at 18 years and over, the Diploma being granted at 21. Candidates over 40 years of age may be exempt from sections (a) and (c) of the Preliminary Division. Candidates who pass in some Sections and fail in others are not required to sit again for the Sections in which they were successful.

Candidates may take the Divisions separately, or at one Examination.

A Diplomate may claim the **Freedom of the City of London.**

Please detach this form, place your name and address upon the other side and send to:—

C. A. SCURR

50, HIGH STREET

BARNET

LONDON, N.

The B.O.A. EXAMINATION consists of :—

- Section I. Frames, Lenses, and Optical Bench.**
Section II. Sight-testing ; Viva-voce Physiologic Optics and Diseases of the Eye.
Section III. Written Papers in Theoretical Optics.

The Sections may be taken together or at separate Examinations, at the same inclusive fee. This Examination may be taken by Candidates over 18 years of age, although the certificate is not granted until such Candidate is 21 years of age.

It should be noted that new conditions of entrance will be enforced as from 1st January, 1931. A Candidate will be required to have passed a Preliminary Examination of Matriculation standard ; also definite conditions of training in mechanical and technical optics, in addition to clinical experience, will be necessary.

(NOTE.—Candidates who take any Section(s) at the Examination in November will be exempt from the new regulations.)

Diplomates of either the **S.M.C.** or **B.O.A.** are registered by the **Joint Council of Qualified Opticians (J.C.Q.O.)**.

THE N.A.O. EXAMINATION consists of the **First Examination** and **Final Examination** which may be taken together or separately.

(1) **THE FIRST EXAMINATION** consists of :—

- (a) **Written Examination in General and Practical Optics and Optical Calculations.**
 (b) **Viva-voce Examination in General and Practical Optics and Optical Calculations.**

(2) **THE FINAL EXAMINATION** consists of :—

- (a) **Written Examination in Visual Optics ; in Anatomy, Physiology, and Diseases of the Eye.**
 (b) **Viva-voce Examination in Visual Optics ; in Anatomy, Physiology, and Diseases of the Eye.**
 (c) **Practical Sight-testing.**
 (d) **Practical Face and Frame Measurements.**
 (e) **Practical Analysing and Marking of Lenses and Prisms.**

Candidates over 40 years of age are exempt from the First Examination.

Upon request an official syllabus of Examination of any of these examining bodies will be sent to any fellow-Pharmacist.

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Please send me full particulars of your Courses and the Optical Examinations, without obligation.

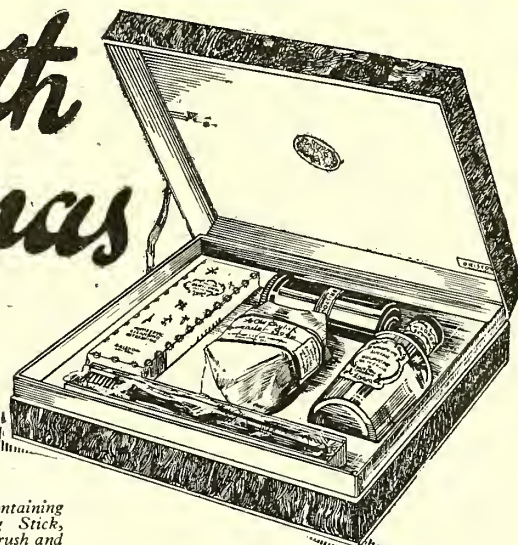
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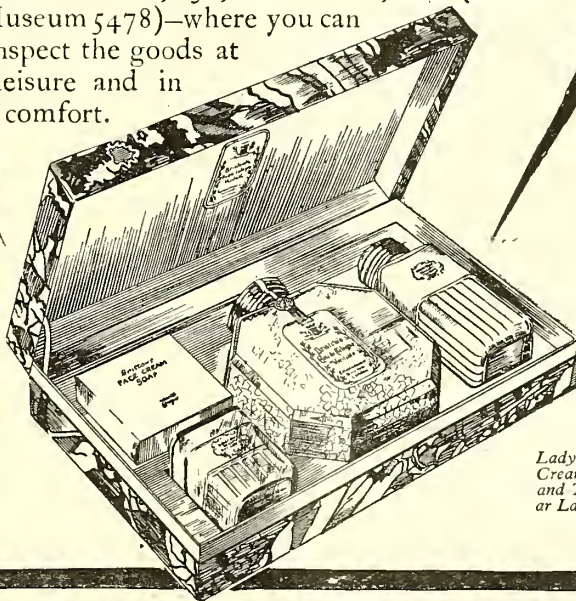


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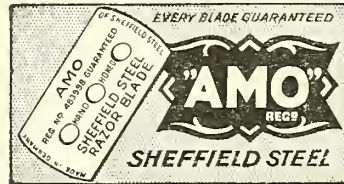
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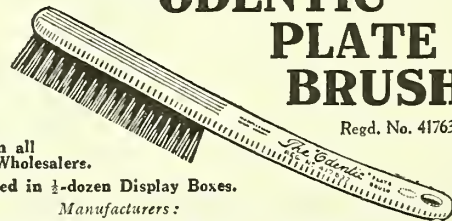


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"My sister and I use your Shampoos, Setting Lotion and Cream. We have just added a Creme de l'Opera to our supply and find it quite different to other creams, it has softened my skin very quickly.—E.M."

"It may be of interest to you to know that having run out of my usual brand of hair cream, I risked asking my wife to obtain a further supply. On the following morning I found a bottle of Ku-Bist in the place of the usual cream.

I must mention that my hair is particularly wiry and I was obsessed with the idea that only a very heavy sticky cream would control it, but from the first application of Ku-bist I found my hair was perfectly controlled, without the usual 'gluey' appearance.

I am extremely grateful to both you for marketing such an excellent product, and to my wife for her good taste in purchasing it.—J.T."

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Recently, during a fortnight's stay at Pagharn, nr. Bognor, my forehead became sunburnt and very tender, and as soon as my hair became disarranged owing to the wind and sun having dried the cream which I was using, particles of hair would irritate my forehead very considerably. Determined to find some sort of fixative to overcome this nuisance I asked the advice of a chemist in Bognor who immediately recommended Ku-bist Rosola Fixative. I agreed to purchase a bottle, and I must confess that the result was all that could be desired.

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(Medium) 1/9 " ..	13/6 " "
(Large) 2/9 " ..	21/- " "
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Bay Rum	Pine Tar Shampoos
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BRILLIANTINE, SOLID—	
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1/6 jars	12/- per doz. net.
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CREME DE L'OPERA—	
Retail 2/9	20/- per doz. net.

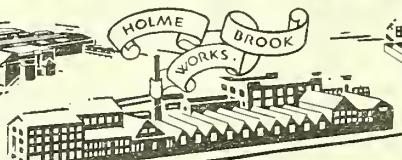


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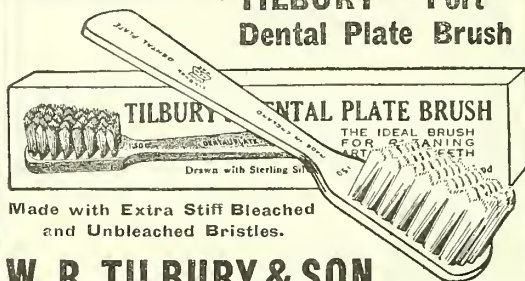
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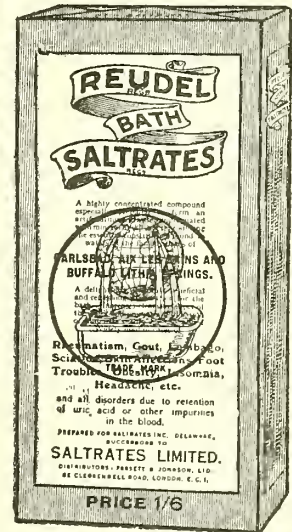
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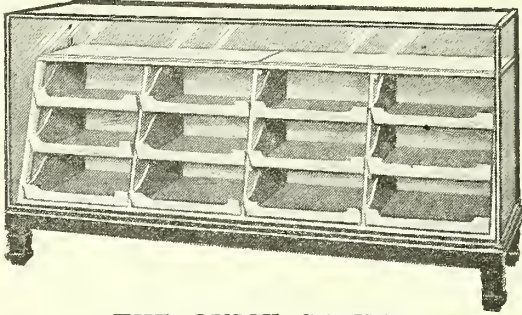
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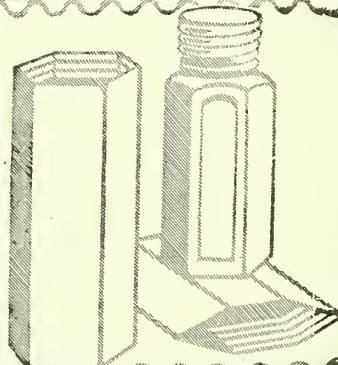
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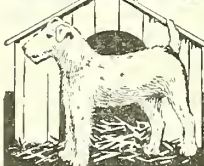
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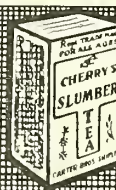
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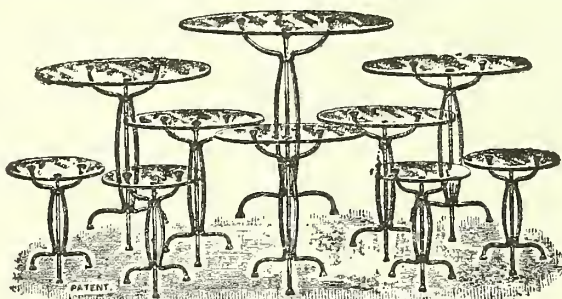
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	Retail	Monthly a/c	Cash with Order
1/2 gall. tins	10/-	7/6	6/8
1 " "	18/-	13/6	12/-
5 " "	80/-	60/-	53/4

DANZO BEETLE POWDER

For destroying Blackbeetles, Cockroaches, Crickets, &c.
 Retail Prices (Protected). Wholesale prices per doz.
 In tins 3d. In boxes of 2 doz. 2/1
 " 6d. " " 1 " 3/8
 " 1/- " " 1 " 7/3
 " 2/6 " " 1 " 18/-
 Danzo Beetle Powder will not deteriorate by keeping.
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 Telegrams: "Virudana, Sedist, London." Telephone: Hop 2717

BATTLES SEED DRESSINGS

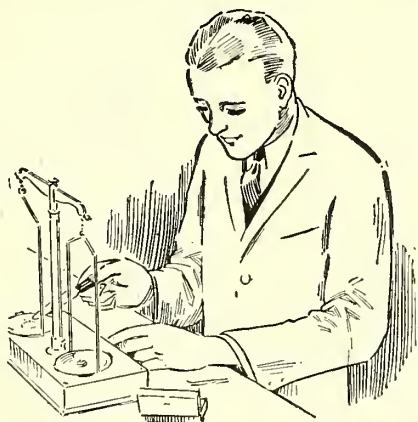
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CARBOLISED DRESSING (Farmers' Friend). Specially recommended
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Let us quote for your 1930 Season requirements.

BATTLE, HAYWARD & BOWER, Victoria Chemical Works, LINCOLN.

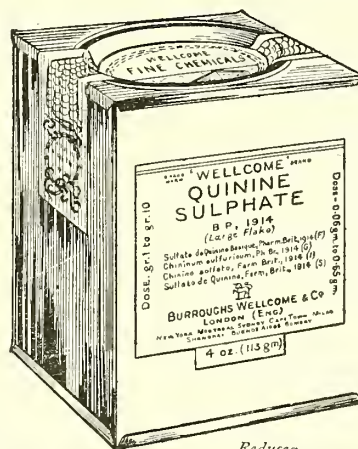
*For your
Dispensing
Department*



TRADE MARK **'WELLCOME' BRAND QUININE**

Each batch of 'Wellcome' Brand Quinine Salts is issued only after passing the most stringent tests. Purity and activity can always be relied upon. Exacting pharmacists know that no finer Quinine Salts can be procured

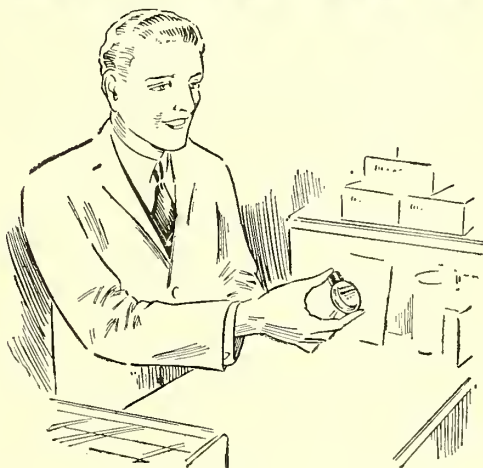
Quinine salts issued under the 'Wellcome' Brand are: Bihydrochloride, Bisulphate, Hydrobromide, Hydrochloride, Salicylate, Sulphate, etc. For full list and prices, see 'Wellcome' Brand Chemicals and Galenicals Price List



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For your Retail Counter

TRADE MARK **'TABLOID' BRAND AMMONIATED QUININE**



Each product contains Quinine and Ammonium Bicarbonate to correspond with one fluid drachm of the official tincture

(Sugar-coated)

*Bottles of 25 and 100
16/- and 52/- per doz. (subject)*

BURROUGHS WELLCOME & CO.
LONDON

THE CHEMIST AND DRUGGIST



A WEEKLY JOURNAL OF PHARMACY,
THE DRUG, CHEMICAL & ALLIED TRADES.

Telegrams: "Chemicus, Estrand, London."
Telephone: Central 6565 (8 lines).

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Vol. 113. No. 13

CONTENTS

September 27, 1930

PAGE	PAGE	PAGE	PAGE
Books, New	404	Editorial Articles:—	
Business Changes	399	Gift Schemes	402
C. & D. Commercial		Linseed Oil Outlook ..	403
Compendium	417	A Legal Definition ..	404
Chlorine: A Phase in		English News	383
its History—I	406	Gazette	385
Coming Events	385	Gifts as Sales Aids ..	398
Company News	386	Grocers' Exhibition ..	385
Correspondence:—		Information Department	400
Letters	414	Insurance Act Dis-	
Subscribers' Sym-		persing	408
posium	415	Irish News	384
Dispensing Notes ..	416	Marriages	400
Legal Queries	416	Mercury in New	
Miscellaneous		Zealand	405
Inquiries	416	Observations and Reflec-	
Deaths	400	tions	401
		Personalities	400
		Pharmaceutical	
		Society of Northern	
		Ireland:—	
		Council Meeting	387
		PROGRESS OF PHARMACY:—	
		Pharmacy	388
		Pharmaceutical	
		Chemistry	389
		Agricultural	
		Chemistry	390
		Analytical Chemistry	390
		Biological Chemistry ..	390
		Industrial	391
		Bacteriology	392
		Dentistry	395
		Essential Oils	394
		Materia Medica	394
		Medicine	395
		Optics	396
		Pharmacology	396
		Photography	397
		Veterinary Medicine ..	357
		Recent Patents	407
		Retail Pharmacists'	
		Union	385
		Retrospect	416
		Sale of Trusses	398
		Scottish News	384
		September Drug Tariff	385
		Trade Marks	399
		Trade Notes	399
		Trade Report	409
		Wills	400

English and Welsh News

The Editor will be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

Safeguarding of Industries Act

The question of the renewal of the Safeguarding of Industries (Exemption) No. 3 Order, 1929, No. 4 Order, 1929, and No. 1 Order, 1930, made under Section 10 (5) of the Finance Act, 1926, is now under consideration by the Board of Trade. The articles covered by these Orders which exempt them from duty until December 31, 1930, are:—

Acid adipinic; acid hydrocyanic anhydrous; acid lactic which satisfies the requirements of the British Pharmacopœia; acid oxalic; amidopyrin (pyramidon); dimethyl-amidoantipyrine); ammonium perchlorate; barbitone (veronal); malonal; malourea; acid diethyl barbituric; diethylmalonylurea; hypnogen, deba); bromural (dormigene); celtium oxide; chinolol; cocaine, crude; dial (acid diallyl barbituric); dicyandiamide; didial (ethyl morphine diallyl barbiturate); dysprosium oxide; elbon (cinnamoyl para oxyphenyl urea); erbium oxide; ethylene bromide; eukodal; europium oxide; furfural; gadolinium oxide; glycol ethers; guaiacol carbonate (duotal); holmium oxide; hydroquinone; integrators (planimeter type); R. lead acetate; lead tetraethyl; lipiodin; lutecium oxide; mercury vapour rectifiers; metaldehyde; methyl cyclohexanol methyl adipate; methyl sulphonal (diethylsulphonemethylethylmethane, trional); neodymium oxide; nickel hydroxide; oxymethyl paraoxyphenyl benzylamine methyl sulphate; papaverine; phenacetin (acetparaphenetidine); phenazone (antipyrine); phenyl-dimethylpyrazolono; analgesin; anodynine; dimethyl oxychinizin); phenetidine, para—; phytin; piperazine (diethylene-diamine; dispermin); planimeters; R. potassium chlorate; potassium ethylxanthogenate (potassium xanthogenate); potassium guaiacol sulphionate (thiocol); R. potassium hydroxide (R. potassium caustic; R. potassium hydrate); R. potassium permanganate; praseodymium oxide; pyramidon-veronal;

quinine ethyl-carbonate; radium compounds; resorcinol (resorcinol) salol (phenyl salicylate); samarium oxide; styracol (guaiacol cinnamate); sulphonal; synthalin; terbium oxide; thallium oxide; urea (carbamide); vanadium-silica compounds specially prepared for use as catalysts for sulphuric acid manufacture; ytterbium oxide; yttrium oxide.

Communications on this matter should be addressed to the Principal Assistant Secretary, Industries and Manufactures Department, Board of Trade, Great George Street, London, S.W.1, within one month from September 24.

Incorporated Society of British Advertisers

A meeting arranged with the object of discussing the formation and future policy of a chemists' trade section of the Incorporated Society of British Advertisers was held at the Holborn Restaurant, London, W.C., on September 18. Mr. B. E. Kent (Allen & Hanburys, Ltd.) presided, and was supported by Mr. W. H. Hartley (vice-president of I.S.B.A.), Mr. T. Bell (chairman), Mr. W. G. Wilsher (treasurer), and several members of the Executive. The following are some of the wholesalers who were represented:—Kodak, Ltd., Genatosan, Ltd., Scott & Bowne, Ltd., Goodall, Backhouse & Co., Imperial Chemical Industries, Ltd., Virol, Ltd., Johnson & Johnson (Great Britain), Ltd., and Glaxo. Mr. Kent outlined the proposal to form such a chemists' trade section, demonstrating the need for it within the I.S.B.A., and suggesting subjects that it might usefully consider, such as pharmaceutical politics, trade Press and lay Press, Parliamentary Bills and the like. Mr. Edgell (Genatosan, Ltd.) followed, in support, and added to the list of practical questions that were continually cropping up in any branch of industry connected with both retail and manufacturing pharmaceutical trades. He specially mentioned composite

pages, window competitions, wholesalers' catalogues, and urged that joint action should be considered whenever any case appeared to call for it. Several other representatives, spoke strongly in favour of the formation of the section, and, summing up, Mr. T. Bell (Kodak, Ltd.) said he was in hearty accord with the idea. He spoke of several of the peculiar difficulties attendant upon wholesale and manufacturing as well as retail and distributing chemists' trades, remarking that on matters of broad and general policy the new section would have opportunities of rendering valuable service both to the whole trade and to the Society. He approved the principle of decentralisation in the work of the Society as far as it could be reasonably carried out. "It will increase the value and effectiveness of the Society and mean a great saving of Executive time." The following resolutions were unanimously passed:—That a Chemists' Trade Section be formed; that Mr. B. E. Kent and Mr. H. Colin Edgell be, and hereby are, elected chairman and secretary respectively; that the first meeting of the section be called for on October 30, at Brighton, in connection with the second Annual Conference of Advertisers.

Contracts

The following tenders have been accepted by the bodies named:—

Croydon Public Assistance Committee.—Thomas Hodgkinson, Preston & King, drugs; Burroughs Wellcome & Co., special drugs; Carnegie Bros., dressings; Allen & Hanburys, Ltd., surgical instruments.

Watford Guardians.—Carnegie Bros., surgical dressings; E. M. & M. T. Chater, drugs.

Inquests

At Holborn, London, on September 17, a "Suicide" verdict was recorded in the case of Edward E. Freeland, who was found dead in bed. Near him were two bottles of potassium cyanide, one half empty.

At Walworth, London, S.E., on September 22, a verdict of "Death by misadventure" was returned at an inquest on Ada Carter, Peckham, whose death was due to an overdose of medicinal.

At Camberwell, London, S.E., on September 17, an inquest was held on a 20-months-old baby. The child had pulled a cloth from a table, smashed a bottle of quinine tablets and swallowed some of them. A verdict of "Death by misadventure" was recorded.

At Uxbridge, on September 19, an inquiry was held regarding the death of Eric N. Commander, dentist, Hillingdon. Police evidence was to the effect that under the body was a bottle containing a quantity of cyanide of potassium, and in one of his pockets an empty bottle labelled chloroform. According to medical evidence death was due to cyanide of potassium poisoning. A verdict of "Suicide" was returned.

Liverpool

Travellers for Christmas orders are making their customary calls, but they are not doing particularly well in regard to orders, most chemists having had by force of circumstances to adopt the hand-to-mouth style of business.

Much sympathy is being expressed with Mr. J. G. Wallbridge, the ex-president of the Liverpool Chemists' Association, on the death of his wife (see p. 400). They had been married forty-two years. Interment will take place at Holy Trinity Church, Wavertree, on September 25.

An illustrated article on the pharmaceutical establishments of Mr. E. Harriman, 93 Mount Pleasant, and 138 Brownlow Hill, Liverpool, appeared recently in "Town and Country News." The business was founded in 1876 by Mr. E. Harriman, who is now assisted by his son, Mr. H. E. Harriman.

Miscellaneous

WINDOW SMASH.—A window at the pharmacy of Mr. Harding Rees, chemist and druggist, South Norwood,

London, S.E., was broken by a runaway horse on September 12.

POISON-LICENCE APPLICATION.—Mr. John Arthur Gregson (Cumberland & Westmorland Farmers, Ltd., Penrith and Wigton) has applied to the Cumberland County Council for a licence to sell agricultural and horticultural poisons.

GOLF.—The Northumberland and Durham Chemists' Golf Association held the final competition of the year over the Tyneside course, Ryton-on-Tyne, on September 17. Play was against bogey for the Ayrton cup, which was won by Mr. W. Robson, Newcastle, with a score of all square. Mr. A. Simpson, Alnwick, and Mr. W. Cosans, North Shields, were second with a score of 3 down.

Scottish News

Brevities

This season's yield of honey from Scottish apiaries has been disappointing.

Mr. C. M. Smith, chemist and druggist, Forfar, has presented Angus Constabulary Sports Club with a gold watch for golf competition.

The window display of Mr. R. S. Ramsay, chemist and druggist, Auchterderran, won a third prize in the recent Ensign window display competition.

A Fife chemist writes:—At least one Scottish chemist has been working for years on lines coinciding with Mr. J. Humphrey's suggestion to "eschew" all but "chemists only" wholesalers and has no reason to regret his attitude.

Bailie Watts, chemist and druggist, Harley & Watts, Ltd., chemists, Crieff, who has been a member of Crieff Town Council for a number of years, and is one of the best known business men in the town, has decided to retire from public life.

Glasgow

The tenth Glasgow Housing and Health Exhibition will be opened in the Kelvin Hall on September 25.

Irish News

Pharmaceutical Society of Northern Ireland

September 22 was the last day for receiving nominations for annual elections to the Council of the Pharmaceutical Society of Northern Ireland. The retiring members were Messrs. A. C. McBride, W. S. Taylor, R. I. Edwards, A. Wilson (pharmaceutical section); Messrs. Samuel Gibson, William Martin (registered drug-gist section). Mr. Wilson, owing to ill-health, did not offer himself for re-election. The other retiring members were again nominated. For the vacant place in the pharmaceutical section Mr. J. C. Culbert, president of the North Irish Pharmacists' Association, was nominated. There will, therefore, be no contest this year.

Brevities

"The Romance of Pharmacy" was the subject of a paper read by Mr. W. B. Conyngham, M.P.S.I., at a meeting of the Dublin Rotary Club recently.

The annual report of the Ministry of Commerce on companies in Northern Ireland for the past year shows, under the heading of "Chemists and Druggists," nominal capital £353,500, subscribed capital £267,368, paid-up capital £110,887, and capital considered, as paid £151,281. This year the figures are £360,300, £277,062, £109,836 and £159,081 respectively.

Belfast

Councillor Samuel McLoughlin, Ph.C., has been elected chairman of the Maternity and Child Welfare Committee of Belfast Corporation.

Grocers' Exhibition

THE thirty-fourth International Exhibition and Market of the Grocery, Provision, Oil and Italian Warehousemen and Allied Trades was opened at the Agricultural Hall, London, N.1., on September 20. There are approximately 170 exhibitors. Official representation is to be found in the display of The Empire Marketing Board, which body has, this year, somewhat departed from the conventional exhibit. Instead of employing the usual methods of displaying the products of the Home Country and the various Overseas Dominions and Colonies, the Board has devoted the whole exhibiting area to the laying out of a sample and sale room, modelled on the lines of a trade exchange. There are also exhibits by the Trade Commissioner for South Africa, New Zealand Dairy Produce Board and Australian Trade Publicity.

Household and toilet soaps and allied products are shown at the stands of THE BRITISH SOAP CO., LTD. (soap flakes, New Pin soap); JOSEPH CROSFIELD & SONS, LTD. (Persil, Glitto and Garbosil); CUSSENS, SONS & CO., LTD. (toilet soap, soap flakes, shaving sticks); J. C. & J. FIELD, LTD. (Nell Gwynn candles, Our Nell soap and Field-Day); JEYES' SANITARY COMPOUNDS CO., LTD. (disinfectant soap and disinfectants); CHARLES MIDGLEY, LTD. (medicated soaps, toilet soaps and novelties); SCRUBB & CO., LTD. (cloudy ammonia and antiseptic soap); SMITH'S (HAMPTON), LTD. (Volvolic soap, soap flakes and bar soap); STANDARD SOAP CO., LTD. (Fleetwing soap products, Solflex soap flakes); JOSEPH WATSON & SONS, LTD., show Matchless Cleanser, Venus toilet soap, glycerine and soap powders; WM. WREN & CO., LTD., display metal polish, floor and furniture polish and shoe cream. Dyes are exhibited by WM. EDGE & SONS, LTD., and FAIRY DYES, LTD.

Food products and beverages are shown by ARMOUR & CO., LTD. (extract of beef, beef cubes); BEAUFOY'S WINES, LTD. (malt vinegar, olive oil and lemon squash); BEEFEX, LTD. (beef extract in bottles and cubes); COW & GATE, LTD. (milk food); DAW'S FRUIT CORDIALS, LTD. (orange and lemon squash and ginger beer cordial); IDRIS, LTD. (mineral waters, cordials and fruit syrups); JEWSBURY & BROWN, LTD. (table waters, ginger wine and Tanzaro non-alcoholic winter wines and cordials); THE MARMITE FOOD EXTRACT CO., LTD. (Marmite); OXO, LTD. (concentrated foods); PEEK BROS. & WINCH, LTD. (Matte Real tea); RAYNER & CO., LTD. (flavouring essences, food colours); L. ROSE & CO., LTD. (fruit drinks); VIROL, LTD. (Virol and milk).

There are a good number of exhibitors, including the following, who show shop equipment:—W. & T. AVERY, LTD. (full range of scales); AUTOMATIC SCALE CO., LTD. (automatic indicating scales and personal weighing machines); THE BERKEL AUTO SCALE CO., LTD. (scales); BRITISH AUTOMATIC VENDORS, LTD. (automatic vending machines); G. H. GLEDHILL & SONS, LTD. (self-closing, coin-exhibiting and check tills); THE METRO BUREAU EQUIPMENT, LTD. (cash registers); THE NATIONAL CASH REGISTER CO., LTD. (latest models cash registers); PARNALL & SONS, LTD. (fittings, showcases and counters); REMINGTON CASH REGISTER SALES CO., LTD. (Remington cash registers); H. C. SLINGSBY (trucks, extension ladders and elevators).

Advertising and display material is shown by O. D. BINGER (SALES AIDS), LTD., who exhibit a range of mechanical displays and show window attractions; LAMSON PARAGON SUPPLY CO., LTD. (business systems, paper bags and wrappings); MANSELL, HUNT, CATTY & CO., LTD. (plain and fancy boxes and ornaments); MASSON, SEELEY & CO., LTD. (showcard and price ticket machines); WRIGHTS, SON & CO., LTD. (posters).

Machinery is displayed by WILLIAM GARDNER & SONS (GLOUCESTER), LTD., SOUTHALL & SMITH, LTD., and WALLIS TIN STAMPING CO., LTD. The CANNING TOWN GLASS WORKS, LTD., display glass bottles and jars of every description; J. W. SUTCLIFFE & CO., and SUTAX, LTD., show glass bottles and jars and sealing machines.

Other exhibitors include:—P. H. GALLOWAY, LTD.; PRICE'S PATENT CANDLE CO., LTD.; THE RYVITA CO., LTD.; SPILLERS VICTORIA FOODS (Branch of SPILLERS, LTD.); WHIFFEN & SONS, LTD.

Retail Pharmacists' Union

Executive Committee

The undermentioned have been nominated to fill the vacancy on the Executive Committee in the representation of No. 2 Area (Western). The voting papers were dispatched to members in that area on September 23, returnable on October 9, 1930:—Samuel George Challinor, 113 High Street, Fenton, Stoke-on-Trent; James Bridge Francis, 53 Hope Street, Wrexham; Frederick Jacks, 13-14 Granville Terrace, Stone, Staffs; Thomas Dixon Nutt, 7 High Town, Hay, Hereford; Sir Leonard Bromfield Rowland, The White House, Bersham, near Wrexham.

September Drug Tariff

THE following are the chief alterations for September in the Insurance Drug Tariff for England and Wales:—

Lower.—Aq. camph. conc., 4s. 9d. lb.; argent. proteinas, 1s. 4d. oz.; argent. vitellin., 4s. oz.; dec. senegæ conc., 4s. 3d. lb.; elixir diamorph. et terpin, 4s. 6d. lb.; emuls. ol. morrhuae, 1s. 6d. lb.; ext. bellad. vir., 9s. lb.; ext. nuc. vom. liq., 6s. lb.; ext. opii liq., 5s. lb.; ext. opii sicc., 6s. oz.; ext. seneg. liq., 10s. lb.; ext. viburn. liq., 8s. 6d. lb.; ferri et ammon. cit., 3s. 6d. lb.; glycer. belladon., 5s. 6d. lb.; inf. ros. acid. conc., 3s. 9d. lb.; inf. ros. acid. ex conc., 5d. lb.; inf. senegæ conc., 3s. 8d. lb.; lin. opii meth., 4s. lb.; liq. am. acet. conc., 1s. 2d. lb.; liq. opii sed., 7s. lb.; ol. menth. pip., 24s. lb.; opium pulv., 2s. 8d. oz.; pot. iod., 21s. lb.; pulv. cret. arom. c. opio, 3s. 9d. lb.; pulv. ipecac. co., 9s. lb.; pulv. scammon. co., 7s. lb.; pulv. tragac. co., 2s. 9d. lb.; spt. cajuputi, 8s. 4d. lb.; tr. colchici, 6s. 3d. lb.; tr. ergotæ ammon., 6s. 6d. lb.; tr. krameria, 1s. 3d. per 4 oz.; tr. lobel. aeth., 7s. lb.; tr. opii, 6s. 3d. lb.; tr. opii ammon., 5s. 9d. lb.; tr. podoph. ammon., 8s. lb.; tr. valerian, 5s. 3d. lb.; ung. gallæ c. opio, 5s. 6d. lb.; ung. ichthamol, 7s. 10d. lb.; ung. methyl sal. ft., 3s. 4d. lb.; vinum ipecac., 3s. 4d. lb.

Higher.—Acid. tannic., 4s. 9d. lb.; adeps præp., 1s. 3d. lb.; lin. methyl. salicyl., 1s. 10d. lb.; ol. caryoph., 13s. lb.; ol. croton, 2s. 6d. oz.; ol. olive, ros. gal.; pil. codeinæ gr. $\frac{1}{2}$, 8.0d. doz.; pil. morph. hyd. gr. $\frac{1}{4}$, 5.3d. doz.; pil. pulv. opii gr. $\frac{1}{2}$, 2.7d. doz.; pil. pulv. opii gr. 1, 3.2d. doz.; pot. cit., 3s. 4d. lb.; sodii citras., 3s. 4d. lb.; tr. aurantii, 19s. 8d. lb.; tr. cantharidini, 7s. 4d. lb.; tr. catechu, 4s. lb.; tr. pulsatilla, 1s. 5 $\frac{1}{2}$ d. per 4 oz.; ung. calaminæ, 1s. 8d. lb.

Gazette

Bankruptcy Acts

RECEIVING ORDER AND ADJUDICATION

WATCHORN, R. M., 12 Shrewsbury Street, Hodnet, Salop, chemist.

Coming Events

This section is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Wednesday, October 1

Cardiff Pharmacists' Golf Club, Cardiff Golf Club, Penylan. Fourth open meeting for Cardiff Pharmacists' Challenge Cup. All proceeds to Benevolent Fund.

LONDON COUNTY PHARMACEUTICAL ASSOCIATION.—Opening of session dinner and dance, Restaurant Frascati, Oxford Street, W., on Thursday, October 9. Reception 6.30 p.m. Evening dress optional. Tickets 12s. 6d. each, from the secretary, Mr. G. A. Tocher, 233/6 Bank Chambers, High Holborn, W.C.1.

New Companies and Company News

P.C. means **Private Company** and **R.O.** **Registered Office.**

LAVODOR, LTD. (P.C.).—Capital £2,000. Objects: To carry on the business of manufacturers of or dealers in all kinds of disinfectants, deodorants and sanitary and toilet appliances, etc. The directors are: H. Fitton, L. E. Shaw and T. G. Armstrong. Solicitors: Frederic Hall & Co., Folkestone.

WILCOCK & Co. (CHURCH), LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of manufacturers of and dealers in synthetic resin, chemicals and chemical compounds and all substances necessary for the manufacture of paints and varnishes, etc. R.O.: 16 Bridge Street, Church, Lancaster.

CORN SQUARE PHARMACY, LTD. (P.C.).—Capital £1,000. Objects: To acquire the business of a chemist and druggist now carried on by E. W. Davis at Corn Square, Leominster, as "The Corn Square Pharmacy." The subscribers are: E. W. Davis and H. J. W. Davis. Solicitors: Sale & Levick, Leominster.

LANGBOURNE & Co., LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of wholesale and retail chemists, importers and exporters of and dealers in chemists' sundries, etc. The directors are: J. L. Cunningham, C. C. Langford and E. O. Cooper. R.O.: 16 Green Street, Leicester Square, W.C.2.

CHARLES FRANCKE, LTD. (P.C.).—Capital £525. Objects: To adopt an agreement with C. Francke and to carry on the business of toilet soap makers carried on by him at 139 Francis Road, Leyton, E.10, pharmaceutical, manufacturing and general chemists and druggists, etc. R.O.: 139 Francis Road, Leyton, London, E.10.

FEEDUM CATTLE AND POULTRY FOODS, LTD. (P.C.).—Capital £6,000. Objects: To carry on the business of manufacturers and merchants of feeding stuffs and oil-cake for cattle, etc. The directors are: J. L. Whitaker, G. H. Robinson, H. Robinson, J. R. Whitaker and F. B. Whitaker. R.O.: Ribble Bank Mills, River Street, Preston.

MET-MEL MANUFACTURING Co., LTD. (P.C.).—Capital £500. Objects: To carry on the business of British and foreign pharmacists, chemists and druggists, etc., and to apply for the registration of "Met-Mel" as a trade mark or name. The subscribers are: T. Mettrick and G. H. Charlesworth. R.O.: 12 Station Road, Holmfirth.

WHITE'S PRODUCTS (OVERSEAS), LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of manufacturers of and dealers in toilet preparations and requisites, essences, lotions, extracts, oils, cosmetics, creams and powders, etc. The subscribers are: W. Lennard, H. J. Horbury. R.O.: Audrey House, Ely Place, E.C.1.

UNIVERSAL CHEMISTS, LTD., was registered as a "public" company on September 15, with a nominal capital of £100. Objects: To carry on the business of chemists and druggists, manufacturers of and dealers in salts, acids, alkalis, drugs, medicines, pharmaceutical, chemical materials, etc. The first directors are: R. Miles and H. M. Williamson.

Mo-A-So PRODUCTS, LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of soap manufacturers, refiners and preparers of and dealers in oils and oleaginous and saponaceous substances, chemists, druggists, etc. The directors are: C. S. Duffus, W. E. Billinghame and F. H. Wrigley. R.O.: Canal Bank, Trundley's Road, Deptford, S.E.8.

ACCESSORY FOOD FACTORS, LTD. (P.C.).—Capital £2,000. Objects: To carry on the business of manufacturers of and dealers in all kinds of food and ingredients of foods for animals, peat moss, litter, fertilisers and manures, oils, glue, yeast, soap, tallow, disinfectants

and fats, etc. The directors are: D. I. Witherington, High Lynch, The Edge, near Stroud, and Elsie M. Witherington, High Lynch, The Edge, near Stroud.

NEVE DRUG STORES, INC.—The United Cigar Stores Co. of America, with two other creditors, filed a petition in bankruptcy on August 30 against the Neve Drug Stores, Inc., operators of sixty-six drug stores in the New York metropolitan district. The Neve Co. is controlled by the United Cigar Stores Co. through the United Retail Chemists' Corporation. Last year its gross sales exceeded \$5,000,000. Its present difficulties are attributed to "hard times" and the cigarette price war of last spring.

COMPANIES WHICH MAY BE DISSOLVED.—Notice has been given in "The London Gazette" that, unless cause is shown to the contrary, the names of the undermentioned companies will be struck off the register and the companies dissolved three months after September 5:—British Aspirin, Ltd.; British Lysol, Ltd.; British Phenacetin, Ltd.; British Sanatogen, Ltd.; Dingwall Chemical Co., Ltd.; East Midland Chemical Co., Ltd.; Ellis & Co. (Chemists), Ltd.; Scientific Truss, Belt & Electric Co., Ltd.

COMPANIES THAT WILL BE DISSOLVED.—Notice has been given in the "London Gazette" that the names of the undermentioned companies will be struck off the register at the expiration of three months, unless cause is shown to the contrary, and the companies dissolved:—Boots British Fine Chemicals, Ltd.; Ikilem Insect Powder Co., Ltd.; Ludgate Chemical Manufacturing Co., Ltd.; Medico Secretarial Book-keepers Service, Ltd.; Radium Manufacturing Co., Ltd.; Regal Perfumery Co., Ltd.; Western Laboratories, Ltd.; and Yetta Soap and Oil Co., Ltd.

BROWNLAC, LTD.—The first ordinary general meeting, held at Caxton Hall, was adjourned until October 6, to give Mr. Rushton (vendor of the company) an opportunity of producing the synthetic shellac of his process under conditions stipulated by the directors. The conditions provided that Mr. Rushton and his chemists, the directors and their chemists and technical representatives should be present, and also representatives of the shareholders. The chemists nominated by the directors were to supervise the test from beginning to end and to take samples of the ingredients other than the secret compound. The material, after mixing, was to be placed in a sealed package and taken to the Vocalion works and passed through its rollers. The directors would ask Mr. Rushton to produce 10 lb. of the material. Mr. Robert Brownlow (the inventor) gave an undertaking that he would supply the necessary quantity of the secret compound to produce the amount stipulated. Lieut.-Colonel G. A. M. Scales (chairman) said that the £9,704 debited to suspense account was the subject of litigation. The greater part represented moneys received by the company's technical adviser, Mr. Brownlow, and his company, Latent Laboratories, Ltd., in connection with the alteration and equipment of the company's factory. The company was formed to manufacture synthetic shellac in accordance with the secret process invented by Mr. Brownlow, and the company bought from the vendor, Mr. Rushton, the right to use this process for £60,000 in shares. Mr. Brownlow had guaranteed that by the process first-grade shellac could be produced at a cost to the company of not more than £50 per ton, including overhead expenses and the cost of all necessary labour and ingredients. Mr. Brownlow from time to time made various excuses and asked for further plant and was given all that he asked for, but not a ton of first-grade shellac was produced. The directors considered that the right course to adopt was to liquidate the company in order that there might be distributed among the shareholders the remaining capital, including whatever amounts might be recovered from Mr. Rushton and Mr. Brownlow. Mr. Brownlow said it was a very long walk from the laboratory to the manufacturing stage, and he contended that he had been handicapped by inefficient machinery.

Pharmaceutical Society of Northern Ireland

Council Meeting

THE monthly meeting of the Council of the Pharmaceutical Society of Northern Ireland was held on September 19 in the Society's headquarters, Belfast, Mr. Fred Storey (president) in the chair. There were present also Mr. S. S. Badger (vice-president), Sir Thomas McMullan, Messrs. H. Todd, J. E. Connor, A. C. McBride, W. J. Hardy, W. S. Taylor, Jas. Dundee, Samuel Gibson, R. I. Edwards, H. McRoberts, J. F. Grimes, Dr. Acheson and Professor Small. Mr. David L. Kirkpatrick (secretary) was in attendance.

DECISION RECONSIDERED

Mr. McBRIDE stated that at the last meeting he had intimated his decision to retire from the Council. He had hoped he would have got out quietly, but an influential deputation from Belfast had waited on him asking him to reconsider the matter. He had also received about twenty letters from different parts of Northern Ireland to the same effect. He had reconsidered the matter and had decided to come forward again, and he had notified Mr. Dundee to that effect. There were six provincial members, and it would be a great pity if those were in any way cut down. The N.I.P.A. had, he understood, originally selected three candidates, all from Belfast, but in his view it would be better when the N.I.P.A. were choosing candidates they should do it at a trade meeting and not at a committee meeting. It was solely because he felt that the provincial representatives should not be reduced that he had decided to come forward again.

The PRESIDENT expressed his satisfaction at Mr. McBride's decision. They had, however, nothing to do with the N.I.P.A. discussions. He agreed that the provincial areas should have adequate representation, and, as a matter of fact, when the Bill was going through he put forward the suggestion they should have territorial representation for each county and the city, but the idea did not meet with approval.

APPLICATION FROM SCHOOL

An application from Lurgan Technical School for recognition for the teaching of chemistry for the final Part II on the ground that it would be a great advantage for local candidates was referred to the president, Professor Small and Mr. Connor for inspection and report.

COUNCIL THANKED

Professor Small wrote thanking the Council for the honour conferred on him by electing him as an honorary member of the Society. He said he appreciated very much that evidence of good feeling between the Society and the University representatives.

POISON LICENCES

The secretary reported that the County Councils of Down, Derry and Antrim had granted licences opposed by the Council to traders other than chemists for the sale of agricultural and horticultural poisons in Newtownards, Draperstown, Cushendall, Ballycastle, Lisburn, Larne and Ballymena.

Mr. HARDY said they were living on promises from the Home Office, but its performances were *nil*.

Mr. CONNOR said chemists had come to the conclusion that the Home Office was throwing dust in their eyes. He thought that the attention of Parliament should be drawn to the matter.

The PRESIDENT said the Home Office had the matter in hand, and he thought it better to wait.

Sir THOMAS McMULLAN said that if the matter were mentioned in the House the country members would at once support the farmers wishing to get sheep dip from others than chemists. Anything that would restrict

the farmers would be turned down by the country members of Parliament.

Mr. HARDY said they were up against the Farmers' Union.

It was decided to await action by the Home Office.

EDUCATION COMMITTEE

The Education Committee's minutes included the following:—

It was agreed that the Society's winter examinations should be held during the week beginning Monday, December 1, 1930, and that all entries must be received on or before Saturday, November 1, 1930.

It was a recommendation to the Council that Dr. Hugh Graham and Dr. C. Emeleus be re-appointed examiners in chemistry and physics respectively for the December examination.

It was agreed that the attendances made by students in chemistry and physics (senior grade) in recognised secondary schools in Northern Ireland could not be recognised as part of the attendances at the classes as specified by the Society's Regulations for the Preliminary Scientific examination, unless they conformed to the Regulations.

Mr. BADGER moved, and Mr. GIBSON seconded, the adoption of the minutes.

Mr. HARDY dissented to the appointment of the examiners on a question of principle. He did not think it was an advantage that all the examiners should go out on the same date, which was the idea of the majority of the Committee. He had no objection whatever to the gentlemen mentioned, but thought that whoever was appointed should be appointed for twelve months, and not temporarily as was proposed.

Mr. GIBSON thought it better all the examiners should be appointed together.

The PRESIDENT said all the appointments ended in December.

The minutes were adopted.

CARDIFF CONFERENCE

The PRESIDENT gave a report on the Cardiff Conference, in the course of which he said that the delegates from the Society were received with every courtesy by the Welsh and English chemists. He had been asked to take part in the official programme, and it was a good opportunity to meet their fellow pharmacists across the Channel.

Mr. BADGER said they had had a very good time, indeed, in Cardiff. Northern Ireland was brought to the fore on every possible occasion, and every kindness and courtesy was extended to them.

Mr. CONNOR said Mr. Storey was an ideal president and represented them splendidly. He himself had enjoyed the visit.

MEMBERS ELECTED

On the motion of Mr. EDWARDS, seconded by Mr. BADGER, the following nominated candidates were elected as members of the Society:—

Richard Green, 10 Bow Street, Lisburn; Hugh Gault, 86 Agnes Street, Belfast; Samuel Smyth, 82-84 Castle-reagh Road, Belfast; Arthur Louis Ferguson, The Medical Hall, Kilrea; Alfred Lamont Martin, jun., 8 Market Street, Portadown; Susan Dundee, 74 Bloomfield Avenue, Belfast; Thomas Maxwell Wright, 11 The Mount, Belfast.

OTHER BUSINESS

The annual financial statement was submitted. Messrs. H. Todd and J. Dundee were appointed scrutineers for the ballot at the annual meeting on October 6, in the event of an election. Accounts were passed and the Council rose.

The Progress of Pharmacy

AND ALLIED SCIENCES

PHARMACY

The Effect of Heat on Acacia.—L. F. Gabel ("Journal of the American Pharmaceutical Association," August 1930) investigates the effect of heat on acacia, and finds that heat applied to the powdered drug increases the viscosity of the mucilage. Prolonged heating at 100° C. produces maximum viscosity. Heat applied to mucilage of acacia does not thicken the mucilage. Volatile matter other than moisture is lost at 100° C.; this indicates a chemical change. Metarabic acid is formed upon heating powdered acacia. Upon preparing a mucilage from acid treated powdered acacia a very thick mucilage is obtained. It is indicated that the thick mucilage obtained with heated powdered acacia is due to the change of arabic to metarabic acid.

Stabilisers in Lard and Ointment of Potassium Iodide.—W. J. Husa ("Journal of the American Pharmaceutical Association," August 1930) has studied the effect of stabilisers in lard in relation to its use in ointment of potassium iodide, N.F.V. Although the value of benzoin as a preservative of lard has seemed well established in the older literature, there has recently been some question on this point. Measuring the deterioration by the liberation of free iodine from potassium iodide, it was found that plain lard deteriorates several times as rapidly as benzoinated lard. In regard to the decolorisation of iodine by unsaturated fats, it was found that benzoin reduces the rate of absorption of iodine at the ethylenic linkages. Although 0.5 per cent. of hydroquinone has been found to retard the development of rancidity in lard, it is not suitable for use as a stabiliser in ointment of potassium iodide, on account of the colour developed, varying from grey to brown. The colour of ointment of potassium iodide, N.F.V., changes from white to grey after several weeks. The ingredient responsible for this change is the benzoin used as a stabiliser in the lard.

Spanish Formulas.—The following preparations figure in the eighth edition (1930) of the Spanish Pharmacopœia:—

ALCOHOL CITREI COMPOSITUM.—OFFICIAL EAU DE COLOGNE.—

Oil of lemon	10 gm.
Oil of citron	10 gm.
Oil of bergamot	10 gm.
Oil of orange-flower	6 gm.
Oil of cinnamon	2 gm.
Oil of rosemary	2 gm.
Tincture of benzoin	2 gm.
Compound spirit of melissa	200 gm.
Alcohol (90 per cent.)	750 gm.

CIGARETÆ STRAMONII COMPOSITUM.—ANTI-ASTHMA CIGARETTES.—

Stramonium leaves	60 gm.
Belladonna leaves	20 gm.
Hyocyamus leaves	20 gm.
Lobelia leaves	20 gm.
Potassium nitrate	2 gm.
Distilled water	10 gm.
Alcohol (95 per cent.)	10 gm.

Cut the leaves small, like tobacco, mix and moisten with the solution of the potassium nitrate in the water

and alcohol. Dry the mixture and fill into cigarettes, each weighing approximately one gram.

ELIXIR ACIDI NUCLEINICI COMPOSITUM.—COMPOUND ELIXIR OF NUCLEINIC ACID.—

Arrhenal	1 gm.
Nucleinic acid	4 gm.
Sodium glycerophosphate	10 gm.
Distilled water	485 gm.
Glycerin	50 gm.
Simple syrup	200 gm.
Syrup of bitter orange peel	125 gm.
Alcohol (95 per cent.)	100 gm.
Vanillin	0.1 gm.
Liquid extract of kola	25 gm.

Dissolve the first three compounds in the distilled water, add successively the glycerin, the two syrups and the vanillin, previously dissolved in the prescribed amount of alcohol, and finally the liquid extract of kola. Mix and filter.

ELIXIR CHLORHYDRUM-PEPSICUM.—

Pepsin	20 gm.
Hydrochloric acid (33.65 p.e.)	4 gm.
Distilled water	36 gm.
Simple syrup	200 gm.
Tincture of gentian	30 gm.
Oil of orange peel	0.5 gm.
Sherry	710 gm.

INJECTIO BROMHYDRATIS SCOPOLAMINE.—INJECTION OF SCOPOLAMINE HYDROBROMIDE.—

Scopolamine hydrobromide	0.05 gm.
Sterile solution of mannite (10 per cent.)	100 c.c.

Dissolve, filter and fill in ampoules of one c.c., which are then sterilised by heating to 70° C. for one hour on three consecutive days.

INJECTIO NOVOCAINE ET ADRENALINE.—INJECTION OF NOVOCAIN AND ADRENALIN.—

Novocain hydrochloride	5 gm.
Solution of adrenalin (0.1 p.c.)	1 gm.
Benzoic acid	0.2 gm.
Sodium chloride	0.8 gm.
Sodium bisulphite	0.05 gm.
Sterile bi-distilled water	to 100 c.c.

Dissolve the sodium chloride and benzoic acid in 70 c.c. of distilled water by the aid of gentle heat; add the sodium bisulphite and novocain hydrochloride, and finally the solution of adrenalin. Filter and complete to 100 c.c. with distilled water. Fill the solution in ampoules of 3 c.c., which are then sterilised by heating to 110° C. for ten to fifteen minutes.

PHENOSALYLUM.—

Phenol	500 gm.
Salicylic acid	40 gm.
Lactic acid	40 gm.
Borax	70 gm.
Glycerin	200 gm.
Eucalyptol	1 gm.
Menthol	1 gm.
Thymol	1 gm.
Distilled water	to 1000 gm.

Heat the glycerin and borax in a tared capsule on a water bath until solution is effected; remove the capsule

The Progress of Pharmacy and Allied Sciences

from the water bath and add the phenol, lactic acid and salicylic acid. When cool, add the eucalyptol, menthol and thymol and complete to 1,000 grams with distilled water.

POMATUM MENTHOLI ET SALICYLATUS METHYLI.—ANALGESIC BALSAM.—

Menthol	...	...	...	10 gm.
Methyl salicylate	...	...	...	15 gm.
Yellow wax	...	...	...	10 gm.
Lanolin	...	...	...	65 gm.

SIRUPUS BROMOFORMI COMPOSITUS.—COMPOUND SYRUP OF BROMOFORM.—

Bromoform	...	...	...	2.5 gm.
Codeine	...	...	...	0.5 gm.
Tincture of aconite	...	...	...	5 gm.
Tincture of ipecacuanha	...	...	...	5 gm.
Alcohol (95 per cent.)	...	...	...	40 gm.
Cherry-laurel water	...	...	...	25 gm.
Syrup of red poppy	...	...	...	300 gm.
Syrup of balsam of tolu	...	...	to	1000 gm.

SIRUPUS CODEINE.—SYRUP OF CODEINE.—

Codeine	...	...	...	2 gm.
Distilled water	...	...	...	20 gm.
Acetic acid (96 per cent.)	...	...	a	sufficiency
Simple syrup	...	...	...	930 gm.

SOLUTIO CHLORETONE COMPOSITA INHALANS.—COMPOUND SOLUTION OF CHLORETONE, INHALANT.—

Chloretone	...	...	...	1 gm.
Camphor	...	...	...	2.5 gm.
Menthol	...	...	...	2.5 gm.
Oil of cinnamon	...	...	...	0.5 gm.
Liquid paraffin	...	...	...	93.5 gm.

SOLUTIO CHLORHYDRATIS ADRENALINE.—SOLUTION OF ADRENALIN HYDROCHLORIDE (1 in 1,000).—

Adrenalin	...	...	...	1 gm.
Hydrochloric acid (N/1)	...	...	...	10 c.c.
Chloretone	...	...	...	5 gm.
Sodium chloride	...	...	...	8.5 gm.
Bi-distilled water, recently heated,	...	...	to	1000 gm.

Dissolve the adrenalin in 10 c.c. of N/1 hydrochloric acid by the aid of a gentle heat in a sterile flask of about 1100 c.c. capacity; add a solution of the chloretone and sodium chloride in 800 gm. of water, and then complete with water to 1000 gm. Filter the solution through sterile filter paper and fill in aseptic bottles of a suitable size (usually 10-30 gm.), which are then filled with carbonic acid gas, well stoppered, and finally sterilised at 100° C. for fifteen minutes. These operations should be carried out in an inactinic light, in the presence of carbonic acid or nitrogen gas. Dilutions are to be prepared by the use of a solution of sodium chloride 9 in 1000.

Tincture of Sunflower.—Dr. H. Erdmann ("Münchener medizinische Wochenschrift," No. 26, 1930) reports that he has obtained good results in febrile conditions from the use of a tincture prepared by macerating the fresh flowers and the fresh stems of *Helianthus annuus* with alcohol (95 per cent.). He prescribed this tincture in the following combination:—

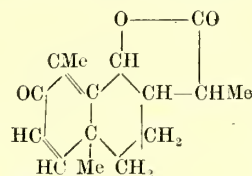
Antipyrin	...	...	...	3 to 5 gm.
Pyramidon	...	...	...	3 gm.
Menthol	...	...	...	0.15 gm.
Caffeine	...	...	...	0.6 to 1 gm.
Tincture of sunflower	...	...	...	40 gm.

Dose.—One teaspoonful three times daily. It indicated, the tincture of sunflower may be prescribed in combination with quinine hydrobromide or hydrochloride.

PHARMACEUTICAL CHEMISTRY

Constitution of Santonin.—G. R. Clene, R. N. Haworth, and E. Walton ("Journal of the Chemical Society," May 1930) have synthesised a lactone identical with racemic *desmotropo*-santonin. The establishment of the α -position of the lactonic oxygen

atom necessitates a modification of the usually accepted structural formula for santonin. The formula adopted below is in agreement with the chemical behaviour of santonin.



Crystalline Ergotoxine.—S. Smith and G. T. Timms ("Journal of the Chemical Society," June, 1930, p. 1390) point out that ergotoxine can be obtained in crystalline form as an additive compound with benzene or its simple homologues. It also crystallises from carbon disulphide (in which the alkaloid is sparingly soluble) in the form of stout prisms when the solvent is allowed to evaporate spontaneously. Ergotoxine cannot be crystallised from the other usual solvents, showing a pronounced difference in this respect from ergotamine, which has the same physiological action qualitatively and quantitatively. The six-sided prisms of ergotoxine crystallised from benzene contain 21 per cent. of the solvent which can be removed by prolonged drying at 90° C. in a vacuum. Dry ergotoxine softens when heated slowly at 180° C. and melts between 190° and 200° C. It is readily soluble in 1-3 per cent. aqueous sodium hydroxide solution, whereas ergotamine is insoluble and melts at 239° C. after preliminary darkening. The commercial ergots of rye contained ergotoxine and ergotinine, the only alkaloids. Two out of three specimens growing upon tall fescue grass in New Zealand contained ergotamine in excellent amount, and it is suggested that the isolation of ergotamine and ergotamine from unofficial ergots depends upon the nature of the ergot rather than the method of extraction.

Digitalis Active Principles.—C. Mannich, Berlin—Dahlem, at the 91st Meeting of the Verein Deutscher Naturforscher und Ärzte in Königsberg, in a short survey of the active principles of *Digitalis purpurea*, added some remarks on new glucosides from *Digitalis lanata*, Ehrh., which he had isolated in collaboration with Mohs and Mauss. The chief glucoside has been designated lanadigin (lanata-glucoside I). It forms crystalline needles, melts about 245° C., is optically active, $[\alpha]_{20}^D = +33.3^\circ$, and has the probable formula $C_{42}H_{66}O_{17} + 4H_2O$. It is soluble with difficulty in water and in chloroform, but readily soluble in alcohol. On hydrolysis decomposition takes place with the formation of a genin, $C_{23}H_{34}O_5$ (lanadigenin) isomeric with gitoxigenin, which probably is identical with digoxigenin, a decomposition product of a glucoside digoxin, recently isolated from *D. lanata* by Smith. The sugar products of hydrolysis are digitoxose, a non-crystallisable sugar, and a non-reducing disaccharide of the formula $C_{12}H_{22}O_9$. A second glucoside (lanata-glucoside II) appears to be composed of a molecular combination or mixture of crystals between lanadigin and another glucoside. In properties it is similar to lanadigin. On hydrolysis two genins were obtained, digitoxigenin and lanadigenin. The decomposition sugars are the same as those with lanadigin. The third glucoside (lanata-glucoside III) shows such a close similarity to the digitalinum verum of Killiani, that there seems no doubt as to the identity of the two substances. The fourth glucoside (lanata-glucoside IV) is only weakly physiologically active. It forms crystals which melt at a temperature not sharply defined at between 240°-250° C. It is scarcely soluble in water and chloroform. The formula may be $C_{42}H_{66}O_{16}$ or $C_{23}H_{34}O_{11}$. By the action of alkalis an isomeric glucoside is formed of weak reaction. On hydrolysis a sugar, apparently glucose, is formed, as well as a crystallisable genin, with m.p. 190° C., for which the formula $C_{30}H_{42}O_4$ or $C_{23}H_{32}O_3$ comes into consideration.

The Progress of Pharmacy and Allied Sciences

AGRICULTURAL CHEMISTRY

Spike Disease of Sandal.—A. V. Varadaraja Iyengar ("Journal of the Indian Institute of Science," Vol. 12A, Part 20, p. 295) finds important differences between healthy and spiked plants of *Santalum album*, Linn. The diseased sap contains less dissolved matter, and hence has less osmotic pressure, but its electrical conductivity is greater. More moisture, ash, nitrogen and acid characterise the sap of plants with spike disease, but the calcium content is lower. These differences persist throughout the year.

The Macadamia Nut.—A note on the comparatively little known Queensland or Macadamia nut (*Macadama Ternifolia*, F. v. M.) appears in the "Bulletin of Miscellaneous Information" (Kew, 5, 1930, 219). The tree is native to subtropical Eastern Australia, but has now been successfully grown in other parts of Australia, in South Africa, Southern U.S.A., certain Mediterranean countries and the island of Hawaii. In the last mentioned country cultivation of the nut has assumed the proportions of an industry. There are at present very few records relating to yield. Under favourable conditions mature trees in Hawaii average about 300 lb. of nuts annually. The kernels are rich in an edible non-drying oil (65-75 per cent.), and are similar in general composition to most other edible nuts. The oil is almost colourless and tasteless, possesses a faint odour and has a low iodine value. The kernels are said to be free from starch and from cyanogenetic glucoside, and to contain 5.6 per cent. of non-reducing sugar. The oil is reported to compare favourably with the best grades of edible olive oil, and to be capable of being used for salads, soap making and medicinally.

ANALYTICAL CHEMISTRY

Doubts on a Reagent.—H. Gardner ("Lancet," 5584, 525), after reviewing the literature of triketohydrindenehydrate, and describing tests of his own, concludes that it is not a reliable reagent for the products of hydrolysis of protein generally. The colour reaction is almost certainly due to the presence of traces of free ammonia, or of NH_3 ions, and is masked by ammonium hydroxide or by an alkali in excess. Traces of alkali merely promote the reaction through causing the liberation of NH_3 ions from an ammonium salt. No doubt such ions appear among the hydrolysis products of protein in the presence of water, hence the reaction.

Starch-Iodide Reaction.—R. G. Turner ("Journal of the American Chemical Society," 52, 7, 2768) makes a study of the starch-iodide reaction in regard to the proportion of iodine present and the intensity of colour produced. The investigation was carried out with small amounts of iodine ranging from 0.0005 to 0.005 mg. These small amounts were chosen as the purpose in mind was to find a suitable method for the quantitative estimation of iodine in small quantities of blood. A standard solution containing 0.001 mg. iodine in the form of potassium iodide was prepared. From the observations given it is evident that minute amounts of iodine ranging from 0.0005 to 0.005 mg. produce, under the conditions stated, a true blue colour which is proportional in intensity to the amount of iodine present. The colour produced can easily and clearly be matched in a microcolorimeter with an accuracy of 0.0001 mg. in the colorimetric reading. The chromogenic substance is stable for at least one hour. Temperature has no effect on the intensity of the colour produced up to 70°, after which the colour produced is less.

Alkali Separations.—H. Yagoda ("Journal of the American Chemical Society," Vol. 52, No. 8, p. 3068) describes a new procedure for the separation of the alkali and alkaline earth metals, using amyl alcohol. After freeing the solution from the first three groups in accordance with customary procedure, the filtrate is boiled to expel hydrogen sulphide and then concentrated to about 5 c.c. The liquid is next filtered into

a 30 c.c. beaker and evaporated to dryness after adding 1 c.c. of $N/16$ nitric acid. The heating is continued until ammonium compounds are removed. The residue is treated with concentrated hydrobromic acid, and again evaporated to dryness, but avoiding overheating. When cool, the deposit is pulverised by means of a stirring rod and 3 c.c. of isoamyl alcohol is added. The mixture is heated to and maintained at boiling point for about thirty seconds and filtered after cooling to room temperature. The filtrate contains magnesium, strontium, and calcium bromides. The residue consists of sodium, potassium and barium bromides. The scheme for further separation of the alkalies includes solvation of potassium bromide with ethyl alcohol and conversion of calcium, strontium, and magnesium residues into nitrates and subsequent decomposition of magnesium nitrate by ignition.

The Bi-coloured Guaiac Test.—The technique of de Thurzo's bi-coloured guaiac test for the cerebro-spinal fluid is given, with tables, by J. G. Greenfield and Ruby O. Stern in "The Lancet" (5581, 339). Two solutions are required. *Solution 1* consists of 0.2-per-cent. sodium chloride with 1 c.c. of $\frac{1}{2}$ -per-cent. sodium carbonate added to each 100 c.c. of saline. The sodium carbonate solution keeps indefinitely. De Thurzo suggests that the saline should be prepared freshly for each test from a stock 10-per-cent. solution diluted, but the authors have found it advisable to make up the 0.2-per-cent. solution from the dry salt each time. *Solution 2* is the bi-coloured guaiac suspension, which is prepared as follows:—0.22 c.c. of 20-per-cent. tincture of guaiacum (B.P.C.) in 9 c.c. of absolute alcohol is added to a flask containing 40 c.c. of distilled water. This mixing of the suspension must be done very slowly and with constant shaking of the flask. The best method of mixing these two solutions is to pipette the guaiacum tincture into the water from a 1 c.c. pipette, allowing not more than 0.5 c.c. to be delivered at a time, and shaking well between the delivery of each few drops. As the success of the test depends on the thorough mixing of these two solutions, it is important not to hurry this step. 2 c.c. of a watery solution of naphthol green (Gurr) is then slowly added to the suspension. The flask should be shaken after this is added. Finally, 0.3 c.c. of an alcoholic solution of brilliant fuchsin (basic fuchsin, Gurr), is added, and the flask again shaken. It is then left to stand for 30 minutes before use. A good suspension should be slightly opalescent and of a dark cherry red colour when freshly prepared. The colour fades to a light cherry red by the end of half an hour, and after twelve hours the colour is a rather dirty shade of pink. The suspension can only be used within three hours of preparation, as after this time the sensitivity alters, and anomalous results are obtained. The authors point out that the test has two disadvantages: (1) A comparatively large quantity (1 c.c.) of cerebro-spinal fluid is required for the test; (2) it is not possible to judge what the final reaction will be under twelve hours, whereas with the Lange reaction a fair estimate may be made after half an hour. For these reasons they do not suggest that this test should replace the Lange test in the routine examination of the cerebro-spinal fluid.

BIOLOGICAL CHEMISTRY

Vitamin B Terminology.—Miss Harriet Chick, secretary of the Committee on Accessory Food Factors, in a letter to "Chemistry and Industry," September 12, p. 769, states that the term "vitamin-B₃" has been reserved provisionally for the Williams and Waterer factor necessary for weight maintenance in pigeon dietary, and the term "vitamin-B₂" has been adopted for designating the Reader vitamin requisite in rat nutrition. The object is to clear up the confusion due to both these accessory factors being referred to in literature as vitamin-B₃. The other two water soluble vitamins present in yeast are the anti-neuritic vitamin-B₁ and the anti-dermatitis vitamin-B₂. It is suggested that to prevent misunderstanding in future

The Progress of Pharmacy and Allied Sciences

qualifying adjectives should be prefixed, e.g., "Reader (rat) vitamin-B₄."

Relation of Carotene to Vitamin A.—J. C. Drummond and R. A. Morton withdraw their previous objection to carotene as a possible source of vitamin A, experiments by these workers and B. Ahmad ("Chemistry and Industry," July 4, 1930, p. 2911) confirming the growth-promoting activity of carotene as regards rats. The previous failure was found to be due to liability of ethyl oleate (used as a solvent for carotene) to undergo oxidation. The smallest dose of pure carotene producing an appreciable gain in young rats is about 0.005 mgm. daily. It is suggested that palm oil, the colour of which is entirely due to carotene, may be a valuable source of vitamin A in animal nutrition. This does not imply the identity of carotene with vitamin A, but that animals can convert carotene in the colourless vitamin. The investigators were unable to obtain confirmation of Euler's claim that dihydro- α -crocin shares with carotene the power of replacing vitamin A in animal dietary.

Action of Irradiated Ergosterol.—"The Journal of the American Medical Association" publishes two lengthy records (94, 24, 1885; 95, 5,316) of investigations by A. F. Hess, J. H. Hess and others concerning the action of irradiated ergosterol in infantile rachitis. The summary of the first of these monographs records that although irradiated ergosterol, in its present dosage, conferred protection against rickets, some evidences of this disorder were apparent in a small number of cases. No hypercalcaemia or other untoward symptoms developed. The cases that showed signs of mild rickets were remarkable for the fact that the inorganic phosphorus of the blood was maintained at its normal concentration. A clinical experience of this kind indicates that an analysis of the blood for inorganic phosphorus may be misleading, and that, when irradiated ergosterol is being given, the presence of rickets will have to be determined by clinical signs and the röntgenogram. It shows also not merely that rickets is a systemic disease but that local factors may play a determining rôle in calcification at the epiphyses. The present method of standardising irradiated ergosterol on the basis of "cod-liver oil units" is founded on the false premise that the action of cod-liver oil and of irradiated ergosterol is the same in infants as in rats. A better method would be to compute the potency directly either as protective or as curative "rat units." The dose of irradiated ergosterol should be increased two and a half or three times.—The second paper suggests an optimal dose for infants from birth to the age of twelve months. While the authors do not wish to conclude that toxic symptoms cannot be produced by large enough doses of irradiated ergosterol in oil, their investigation shows the large factor of safety in the administration of larger doses to infants, at least over limited periods of time. No important difference between the influence of cod-liver oil and that of optimal amounts of irradiated ergosterol on development was noted.

British Standard for Vitamin D.—The Committee on Accessory Food Factors of the Medical Research Council has sanctioned a new standard for vitamin D. Ergosterol from yeast, purified and dried by methods carefully recorded, was subjected, in an accurately made alcoholic solution, to irradiation with the rays from a mercury arc, the physical details of the procedure being measured and recorded with the greatest practicable accuracy. All conditions known to influence the amount of vitamin D formed should, therefore, be reproducible at any future date, or in any other laboratory, leaving only the final adjustment of a new standard to equivalence with this original one to be made on the basis of comparative biological assay. The irradiation products were carefully freed from alcohol, dissolved in pure olive oil, and the volume adjusted to produce a known concentration, in terms of ergosterol used. The solution was then placed, and its main bulk has since been kept, in the Institute's

refrigerating chamber at a temperature of from -4° to 0° C. Specimens of irradiated ergosterol, prepared in the manner described, retain their activity unchanged for two years if maintained at or below 0° C. The Committee has adopted the following resolutions:—

(a) That the standard solution of irradiated ergosterol prepared and maintained by the National Institute for Medical Research be recommended for adoption as a standard for the comparative estimation of vitamin D.

(b) That the unit of vitamin D be defined as the antirachitic potency of a quantity of this preparation corresponding to 0.0001 mg. of the ergosterol used in its production.

(c) That either the x-ray method, the "line test" or chemical analysis of the bones of the experimental animals be recommended for use in the estimation of vitamin D.

(d) That supplies of the standard material be made available for general distribution from the National Institute for Medical Research, Hampstead. As the supply is limited, it is hoped that users will themselves prepare standard solutions of irradiated ergosterol for use in individual tests, retaining the National Institute's material for reference. It is important that all such standard materials be kept at temperatures not exceeding 0° C.

The unit recommended has the same value, in terms of the weight of the original ergosterol represented, as that used for some years past in the Pharmaceutical Society's Laboratories, on the basis of the provisional standard solution supplied to them. The standard solution now recommended for general use cannot be assumed to be exactly equivalent to this, though comparative tests have not revealed a measurable difference. A memorandum giving details for the use of the standard will be sent with each first sample.

INDUSTRIAL CHEMISTRY

Relative Toxicity of Pyrethrins I and II.—C. B. Gnadinger and C. S. Corl ("Journal of the American Chemical Society," August 1930, p. 3,300) have determined the comparative toxicity of specially purified pyrethrins isolated direct from Japanese insect flowers with an average content of 0.95 per cent. pyrethrins. Using the house fly method of Peet and Grady, it was found that pyrethrin II is approximately 80 per cent. toxic as pyrethrin I to *Musca domestica*. Owing to small difference in toxicity between the individual pyrethrins, the determination of the total pyrethrin content by the copper reduction method of Gnadinger and Corl is an accurate index of the activity of samples of insect flowers.

Quality of Commercial Ether.—H. Leffman and C. C. Pines ("Bulletin of the Wagner Free Institute of Science, Philadelphia," 5, 1) investigated the quality of commercial ether and suggest that disturbance in ether anesthesia may be due to improper methods of administration or special susceptibilities, systemic or local. Ordinary tin containers favour the production of aldehydes. Fuchsin-sulphurous acid, especially when prepared according to Fincke's formula, is a delicate test for aldehydes—more convenient than that recommended by the U.S.P. X. The chromic acid test for peroxides is also very delicate and more convenient than that recommended by the U.S.P. X. In both these tests the reagent should be poured through the sample to be tested.

Inorganic Lubricants.—Two methods for the preparation of satisfactory inorganic lubricants for use on glass stopcocks, etc., are given in a note by W. A. Bougerton in "The Journal of the American Chemical Society" (52, 7, 2813), as follows:—Dissolve 10 gm. metaphosphoric acid in 100 c.c. distilled water, add 2 gm. boric acid crystals and stir until dissolved. Evaporate on a steam bath to about 25 c.c. and add 1 c.c. 85-per-cent. orthophosphoric acid; boil gently and stir until temperature reaches 122° ; cool somewhat and transfer to a bottle. The second method consists in dissolving 10 gm. sodium metaphosphate (prepared by heating monosodium phosphate or sodium ammonium phosphate in platinum over a blast lamp until a quiet melt with redness is obtained) in 50 c.c.

The Progress of Pharmacy and Allied Sciences

of distilled water. Add 2 gm. of borax, dissolve and evaporate on a steam bath to a volume of 25 c.c., then boil over a small free flame until 106°. These lubricants may be used with organic vapours and liquids, some acid vapours and with neutral gases, but crystallisation may develop in the presence of alkaline vapours.

New Industrial Solvents.—H. R. Fife and E. W. Reid ("Industrial and Engineering Chemistry," 22, 5, 513) describe the properties of ethylene dichloride, dichlorethyl ether, and isopropyl ether, which compounds have become available at commercial prices for use as industrial solvents. Ethylene dichloride is the most stable chlorinated hydrocarbon, its resistance to hydrolysis and oxidation making it useful for oil extraction from seed cakes, especially where high products are required. Ethylene chloride is finding an extended use in dry cleaning and as an oil and stain remover. For this purpose a mixture of three parts of ethylene dichloride and one part of carbon tetrachloride makes a non-inflammable fabric cleaner. Dichlorethyl ether combines to a marked extent the solvent properties of ethyl ether and ethylene dichloride. It has a low pressure (or high boiling point, 178° C.) and is indicated for high temperature extraction or cases in which solvent recovery is an economic consideration. In conjunction with from 10 per cent. to 30 per cent. of alcohol it becomes an active solvent for cellulose esters. Isopropyl ether has properties similar to ethyl ether with the advantage of a higher boiling point and less solubility in water.

Ethylene Oxide as a Fumigant.—J. M. Russ, jun. ("Industrial and Engineering Chemistry," 22, 4, 328), deals with the insecticidal properties of ethylene oxide. The U.S. Bureau of Entomology discovered the remarkable toxicity of ethylene oxide to insects. A dosage of 1 lb. of ethylene oxide per 1,000 cubic feet of enclosure gives a 100 per cent. kill in twenty hours of the following pests:—Clothes moth (*Tineola biselliella*); carpet beetles (*Attagenus piceus* and *Anthrenus vorax*); rice weevil (*Sitophilus oryza*); Indian meal moth (*Plodia interpunctella*); saw-toothed grain beetle (*Oryzophilus surinamensis*); red-legged ham beetle (*Necrobia rufipes*); and the flour beetle (*Tribolium confusum*). Ethylene dioxide is a colourless liquid boiling at 10.5° C. It is not dangerously toxic to humans, but inhalation in sufficient concentration produces a form of cyanosis counteracted by carbon dioxide gas. Foodstuffs treated with ethylene oxide do not become faintly by taste or odour of residual fumigant. For commercial fumigation a dosage of 2 lb. of ethylene oxide per 1,000 cubic feet is recommended. The amount of fumigant and time of exposure can be reduced, using carbon dioxide along with ethylene oxide. A dosage of 1 lb. of ethylene oxide and 7 lb. of carbon dioxide gives in sixteen hours the same lethal results as 2 lb. of ethylene oxide alone after twenty hours' exposure. A mixture of ethylene dioxide and carbon dioxide in liquid form is being marketed in cylinders. Vacuum fumigation greatly reduces time of exposure needed to destroy insects.

Red Squill Powder as Raticide.—J. C. Munch, J. Silver and E. E. Horne ("Journal of the American Pharmaceutical Association," August 1930) have investigated the preparation of toxic red squill powder, and the following method has been elaborated:—Remove the outer dry husks from fresh red-squill bulbs obtained as soon as feasible after digging, and slice the bulbs transversely into sections one-fourth to one-half inch thick. Place the sliced composite as soon as possible in a drying oven, which has been previously heated to 80° C., and dry to constant weight at that temperature. Grind the dried material so that it will pass through a 40-mesh sieve. Pack the powder in hermetically sealed containers. For the uniform production of red squill suitable for use as a rat poison, feeding tests are necessary upon every lot. Cats, dogs, chickens, pigeons, pigs, woodchucks, prairie dogs and pocket-gophers refused to eat baits containing 10 per cent. of squill powder

(100,000 parts per million). When administered in gelatin capsules or by stomach tube, prompt and thorough emesis was produced. No other effect was noted. From these feeding and stomach-tube experiments, it was concluded that baits containing 5 to 10 per cent. of squill powder either will not be eaten by animals other than rats or will produce emesis with direct removal of the bait. A method of producing uniformly toxic red-squill powders has been developed. The usual lethal dose of these powders is approximately 250 milligrams per kilogram when fed to rats.

BACTERIOLOGY

Effects of Castor Oil Soap on Bacteria.—Dr. R. R. Spencer ("U.S. Public Health Reports," June 13) publishes a series of observations on the clearing of certain bacterial suspensions by the addition of solutions of sodium ricinoleate. The effect of this solution varies widely according to the species of bacteria. *B. tularensis* in suspension of turbidity 250 is cleared immediately with solutions of castor oil soap as low as 1:800. No other bacterial suspension is cleared by this low dilution—the distinction is, indeed, so marked that this technique is suggested as a new method for identifying *B. tularensis*. Other bacteria are cleared in higher dilutions, *B. pestis*, for example, at 1:200 and *Spirillum cholerae* at 1:100. Whenever there was a complete disappearance of visible turbidity a marked increase in viscosity occurred. More remarkable, perhaps, is the increase in turbidity noted in suspensions of *B. columbense* and *B. niger* at certain definite (and in each case specific) dilutions of the sodium ricinoleate.

Insoluble Precipitates in Immunisation.—A. T. Glenny gives a summary of results, with table ("British Medical Journal," 3632, 244), obtained by using for immunisation against diphtheria and tetanus a suspension of the respective toxoid precipitated by potash alum. Different proportions of alum have been tried, and the toxoid has been used with and without the alum. Other work, not yet published, has established that toxoid, injected as a primary stimulus, is excreted with extreme rapidity, and that within a few days of injection not 1 per cent. remains in the animal body. The increase in efficiency of alum toxoid is therefore probably caused by its slow rate of absorption, so that antigenic stimulation is maintained for many days. The addition of alum to toxin has also been used with success in the immunisation of horses against the toxins of scarlet fever, *B. welchii*, and dysentery. The immunity produced by the precipitate formed by the addition of alum to tetanus and diphtheria toxoid is greater than that produced by toxoid alone. The increase in certain experimental conditions has reached a thousandfold.

Vincent's Infection Smears.—A paper by R. R. Byrnes ("The Dental Cosmos," September, 1930) gives the laboratory technique for making, staining and examining smears from Vincent's infection. The steps required in the technique are:—(1) A plain microscopic slide; (2) with a thin wisp of cotton around a toothpick or sharp instrument, or with a platinum loop, rub some of the material on the slide; (3) dry in air; (4) overlay with carbolfuchsin for about three minutes; (5) wash off in gentle stream of water and dry in air; (6) place a drop of cedar oil on the stained slide and examine with the oil-immersion lens of the microscope; (7) look for the spirochete of Vincent and the fusiform bacillus. If one or both are present in considerable numbers, a positive diagnosis is made. The carbolfuchsin is prepared as follows:—Measure out and mix basic fuchsin in saturated alcoholic solution, 10 c.c.; carbolic acid, 3 per cent. aqueous solution, 90 c.c. Filter. The basic fuchsin, saturated alcoholic solution, is prepared as follows:—Weigh out basic fuchsin, pure crystals, 5 grams. Place in stoppered bottle of 150 c.c. capacity, and add ethyl alcohol, 100 c.c. Allow the alcohol to remain in contact with the dye for two hours, shaking vigorously every few minutes. Filter.

The Progress of Pharmacy and Allied Sciences

DENTISTRY

Salt in Dentistry.—G. C. McCann ("British Journal of Dental Science," August 1930) discusses the value of salt as a dentifrice, and gives the following recipe:—Sodium chloride, 25 per cent. to 35 per cent.; sodium sulphate, 6 to 8 per cent.; sodium perborate or borate, 12 to 15 per cent.; sodium bicarbonate, 12 to 15 per cent. For the cleaning and polishing agents: sodium carbonate, 1 to 4 per cent.; calcium carbonate, 20 to 25 per cent.; calcium phosphate, 3 to 6 per cent. The first agents may remain constant; the last three should be varied to meet the demands of prophylaxis.

Sodium Ricinoleate Treatment in Periodontal Diseases.—In 1921 Larson stated that pneumococci and streptococci would not grow in the presence of even small quantities of castor-oil soap, and that tetanus and diphtheritic toxins were found to be completely detoxified when sufficient castor-oil soap was added to reduce the surface tension below forty dynes. Sodium ricinoleate kills streptococcus on contact, neutralises its destructive ferment, and also renders harmless its toxins. Sodium ricinoleate should be used both as a cleansing and as a detoxifying agent. By liberally applying it to the gingival crevice, and with a rotating motion of the brush, forcing it into the pockets, the bacteria crowded in the pyorrhea pockets are reached. A. S. Hopkins ("The Dental Cosmos," August 1930) outlines a method of detoxification in the treatment of acute and chronic periodontal diseases by sodium ricinoleate 40 per cent.

Dental Infections.—H. A. Goldberg ("The Dental Cosmos," September, 1930), in a paper on "Dental Infections and their Relation to Systemic Disease," outlines a method for obtaining pure cultures from suspected teeth. To obtain cultures from a suspected tooth, complete asepsis must be maintained and every step in the technique be followed carefully if pure cultures are to be grown. Contaminations are due to faulty technique. When taking cultures from teeth to be extracted the following method should be used: Paint the gum with tincture of iodine on the lingual and labial sides, then wash with alcohol; insert sterile cotton rolls or sponges labially and lingually, and hold them in place; remove the tooth, having the culture tube ready. Then pass a platinum loop through the flame a few times to make sure it is sterile, permit it to cool, take a smear from the apical end of the root, open the culture tube carefully, passing the lip of the tube over the flame, and insert the loop into the medium, mixing it well; then pass the neck of the tube once more over the flame, and insert the cotton plug.

Treatment of Halitosis.—H. Prinz ("The Dental Cosmos," July, 1930) discusses the principal causes of offensive breath, and states that prophylactic care of the oral cavity by the dentist at stated intervals, combined with intelligent co-operation by the patient with paste or powder, the brush and an antiseptic mouthwash, will eliminate the offensive odour in the majority of cases. If a heavily coated tongue is present, the tongue scraper should never be used; a few downward strokes with the moist toothbrush are sufficient. Artificial dental substitutes require special attention. The plate or bridge should be scrubbed daily with a stiff brush and an abrasive cleansing soap; special attention should be given to the surface covering the gums, the palate and to clasps. If a diseased condition is present in the mouth, proper care by the dentist or the physician is essential. Wounds and ulcerations require frequent use of an antiseptic (deodorizing) solution. For an odour arising from the nasopharynx which had resisted all types of treatment, the smoking of cigarettes which were lightly impregnated with a solution of one part of thymol in six parts of alcohol, with the smoke blown through the nose was recommended. The offensive smell was completely masked for several hours. In case of malodours arising from putrefactive products located between the deep sulci of a grooved

tongue, the following treatment is recommended: Twenty drops of a 2 per cent. solution of vanillin in diluted alcohol (50 per cent.) are added to about one ounce of warm water. The toothbrush is dipped in this solution and passed over the tongue surface in a downward direction. This treatment should be applied twice a day until the symptoms are relieved. The disagreeable garlic odour arising from the administration of an organic arsenical compound source, may be temporarily covered by sucking a peppermint lozenge.

Treatment of Necrotic Gingivitis.—Harold K. Box, Toronto, in a recently issued pamphlet ("Necrotic Gingivitis," University of Toronto Press), outlines a method of treatment in Vincent's stomatitis. This resolves itself into three main steps: (1) Treatment of the acute phase; (2) elimination of secondary incubation zones; (3) elimination of primary incubation zones. In (1) Box recommends topical applications of iodine-silver nitrate—Churchill's tincture of iodine: iodine 16.5 gm., potassium iodide 3.3 gm., alcohol 70 per cent. 100 c.c. The silver nitrate is a 35 per cent. aqueous solution. The following mouthwash is recommended:—

Sodii perboratis	3iv.
Sodii oleatis (neutral)	3iv.
Saccharini	gr. 3
Ol. aurantii	℥. v.
Ol. gaultheriæ	℥. xx.
Ol. menth. pip.	℥. x.
Ol. rosæ	℥. ij.

Sig.—A teaspoonful to a glass of warm water to be used as a mouthwash as directed.

In (2) in scaling avoid transfer of micro-organisms from one site in the mouth to another. For this Box recommends the following:—A small glass containing No. 7½ shot, one-third full, and a 1:1,000 aqueous solution of Hg(CN)₂, mercury cyanide, two-thirds full, is kept at hand. Between scaling procedures, the working point of the instrument is dipped into and stirred in the shot and solution and dried with sterile gauze. Box prescribes the following dentifrice (powder), when indicated:—

Calc. carb. præcip.	3ij.
Calc. phos. præcip.	3ij.
Sodii perboratis	3v.
Sodii oleatis (neutral)	3ij.
Pulv. radialis iridis	3ij.
Saccharini	gr. ½
Ol. gaultheriæ	℥. xx.
Ol. rosæ	℥. x.

Sig.—Use on a wet brush.

The third step is the application of 1 per cent. aqueous acriviolet to the gingival crevice or ulcerated surface. The patient is advised to use a mouthwash of sodium perborate, a teaspoonful to half a glass of hot water, frequently. This may be rendered still more effective by adding to the solution, as described, a third of a teaspoonful of:—

Sodium chloride	3viii.
Calcium oxide	gr. l.
Menthol	gr. viii.
Saccharin	gr. vj.

Treatment of Vincent's Infection.—Details of treatment for Vincent's infection are given in a paper by Byrnes in "The Dental Cosmos," September 1930, and while the treatments for Vincent's infection are widely varied, it will be seen that practically all of them are constructed upon the same principle: the use of an oxidising agent. Dr. Beust recommends the following treatment: Rinse the mouth with a solution of 0.5 gram of potassium permanganate in 1,000 c.c. of water. Thorough repeated rinsings are indicated throughout the following treatment: Swab all lesions and pockets with a wisp of cotton saturated with iodine tincture diluted with an equal part of 50 per cent. alcohol. Remove all soft and hard deposits with suitable instruments. Follow the surgical treatment of each pocket or crevice with thorough and repeated irrigation with aqueous 3 per cent. hydrogen peroxide carried into the pockets with an abscess syringe.

The Progress of Pharmacy and Allied Sciences

Repeat treatment No. 2. Rinse the mouth thoroughly as directed in No. 1. Napkin one-quarter of the mouth. Dry all crevices. By means of a cotton-covered broach apply sufficient concentrated silver-nitrate solution to the walls of all crevices and interdental sinuses. Colony formation will hardly ever occur in a pocket so treated. Extend a similar treatment to the other quarters of the mouth. Repeated applications may cause obstinate discoloration of the dentine or cementum. Following the treatment with silver nitrate conspicuous areas may be painted with iodine solution. Superficial stains, visible after recovery, may be removed by painting with iodine and subsequently rubbing the stained areas with cotton holding concentrated aqueous solution of sodium thio-sulphate. Solutions of potassium permanganate, substituted for the iodine in this decolorisation method, are said to act even more energetically. *After-treatment:* Water containing one-half teaspoonful of sodium borate to the glass should be used for hourly rinsings. See the patient daily for a few days following the treatment. If all of the pockets and lesions have been reached, one treatment will clear most cases. Whenever inflamed areas appear the treatment outlined should be repeated. Another treatment sometimes used is as follows: The necrotic or diseased tissue is wiped off with a pledget of cotton, which has been dipped in a 10 per cent. solution of neosarsphenamin in glycerin. Sodium perborate is used as a mouth-wash, using a teaspoonful in a glass of warm water every half-hour or so. These treatments are repeated as long as necessary. As soon as the inflammation subsides the brushing of the teeth should be resumed and the accumulations around the teeth, if any are present, removed. The patient should continue the sodium perborate mouthwash for a month or so two or three times a day. If the sodium perborate proves irritating to the tissues they may better tolerate hydrogen peroxide, and that drug may be substituted. Dr. Sterling Mead advocates the following treatment: Treatment should be persistent, and given two or three times daily, or more in severe cases. The mouth and throat should be swabbed with hydrogen peroxide. The patient should use a 1:3,000 solution of potassium permanganate as a mouthwash frequently. Occasionally in cases which resist all local treatment the intravenous administration of arsphenamin is of value. Neosalvarsan is also indicated in severe cases. The bowels should be kept open. Anodynes should be prescribed for pain, and plenty of fruit juices and vegetables should be used in the diet.

ESSENTIAL OILS

Essential Oils of *Laurelia serrata*.—G. Fester and J. Salgado ("Zeitschrift für angewandte Chemie," 1929) states that the bark of *L. serrata*, a tree found in the south of Chile, gives a yield of 2.7 per cent. on the dry bark of an oil with the following characters:—*d.* 1.0426; *n.* 1.52182; acid number, 0; ester number, 6.9. The principal constituent is safrol, 3.8 per cent. of oil is obtained by distillation of the leaves. It has, *d.* 0.9469; *n.* 1.49632; α . $-12^{\circ} 5'$; acid number, 1.4, ester number, 9.3. The oil contains sulphur.

Selective Hydrogenation of Citral, Geraniol and Limonene.—R. Escourrou ("Bulletin de la Société Chimique de France," 1928, 43, 1204) gives a method of hydrogenation which applied to citral with a nickel catalyst *in vacuo* at 190° yields inactive citronellal, at 300° , and normal pressure yields a mixture of carbon and dimethyloctanol, and at 180° yields only citronellol. Similarly with geraniol at 130° *in vacuo* with platinum citronellol is obtained, at $150^{\circ}/9$ mm., with nickel the same result is obtained, with limonene selective hydrogenation *in vacuo* gave only 10 per cent. of an hydrogenated product leading to doubts as to the original purity of limonene. Examination of this product shows that it contains 80 per cent. of limonene and a varying proportion of terpinolene. It is suggested that pure limonene does not exist and

that products described under that name are always mixtures. This would explain the fact that the properties of limonene vary according to its origin, and also the reason why limonene from oil of orange has a preservative action on the phosphorated oil.

Ceylon Citronella Oil.—J. Joachim ("Tropical Agriculture," 1929, 73, 136) has examined twenty-one samples of this oil, and from the results no relationship could be established between the percentage of geraniol present and the specific gravity, the refractive index, or the optical rotation. Java and Ceylon citronella oil can be distinguished both by their analysis and by their physical constants. The following tables gives these constants:—

	Ceylon oil	Java oil
Specific gravity	0.898 to 0.920	0.882 to 0.900
Optical rotation	-7° to -18°	$+0^{\circ}$ to -5°
Refractive index	1.4785 to 1.4900	1.4640 to 1.4725
Geraniol	55 to 64%	80 to 92%

Schimmel's test gives variable results and is not sufficient to determine the value of this oil. A determination of the geraniol content is necessary. This should not be less than 55 per cent.

Sesquiterpene Chemistry.—Two important papers have recently been read before the Chemical Society dealing with the chemistry of the sesquiterpenes. Bell has found that cedrene, the characteristic constituent of cedarwood oil, reacts slowly with an aqueous solution of mercuric acetate. Mercurous acetate is precipitated and the aqueous solution is found to contain an amorphous organo-mercury compound which is slightly soluble in ethyl alcohol and insoluble in most other organic solvents, except glacial acetic acid and chloroform. The compound (or mixture of compounds) was purified by precipitation from chloroform solution by ether. Analysis indicates the formula $C_{16}H_{26}O_6Hg_2$, and it is probable that it is a mixture of two compounds which cannot be separated owing to their amorphous nature. Henderson and Agnew obtained the same oxidation products by the action of mercuric oxide in glacial acetic acid. In the case of cedrene there is some resinification during the reaction, but a mercury-free oxidation product is obtained. This consists of an alcohol of the formula $C_{15}H_{24}O$ or $C_{15}H_{26}O$. It is probably identical with the tertiary alcohol pseudo-cedrol isolated by Semmler from cedarwood oil. Bell has also, in conjunction with Henderson, carried his investigations on the caryophyllene series a step farther. A liquid monohydrochloride of a tricyclic sesquiterpene has been obtained in the preparation of caryophyllene dihydrochloride in the usual manner. The authors have now prepared from this liquid monohydrochloride a saturated tricyclic alcohol of the formula $C_{15}H_{26}OH$. It is a colourless liquid, boiling at $146-150^{\circ}$ at 10 mm.; of specific gravity 0.9934 at $17^{\circ}/4^{\circ}$; and refractive index 1.5039. On dehydration with phosphoric oxide it yields an alcohol similar in character with clovene, and may be regarded as a new isomeric caryophyllene alcohol. The authors show that the dehydration of α -caryophyllene alcohol with phosphoric oxide, yields a sesquiterpene whose physical characters indicate a close resemblance with clovene, with which it is probably identical. It is shown that α - and β -caryophyllene alcohols are structural isomerides.

MATERIA MEDICA

Rubber and Tincture of Iodine.—H. R. Zenthen ("Farmaceutisk Tidende," 1930, 14) investigates the change of stain from brown to yellow of tincture of iodine kept for some time in a rubber stoppered bottle. Tincture of iodine was poured on samples of rubber contained in ground-glass stoppered flasks. After fourteen days the amount of iodine had diminished about 29 per cent. and a corresponding amount of acid hydriodic was formed. Experiments with Swedish tincture of iodine (containing potassium iodide) and Danish tincture of

The Progress of Pharmacy and Allied Sciences

iodine (no potassium iodide) gave similar results. Further experiments have shown that it is principally the dressing of the rubber which causes the change. There is sufficient evidence that rubber stoppers are inconvenient for use with tincture of iodine. Cork stoppers are attacked more rapidly, but do not alter the tincture of iodine to such an extent as rubber. Glass stoppers greased with vaseline are also inconvenient, because the vaseline reacts with the tincture.

Percaine: A New Local Anæsthetic.—Percaine, the hydrochloride of α -butylloxacinchoninic acid diethylethylenediamide, $C_9H_{17}N(OC_2H_5)_2CO.NH(CH_2)_2.N(C_2H_5)_2$, HCl, belongs to a group of substances hitherto not used in local anæsthesia. It forms colourless, odourless and tasteless crystals which conglomerate at 90° and liquefy at 97° . Percaine is readily soluble and forms a neutral solution in both alcohol and water. To prepare a solution which can be readily used in any circumstances, a solution of 0.9 per cent. sodium chloride in distilled water (physiological saline solution free of carbonate) is required. Percaine must not come in contact with alkaline solutions, tap water, Tyrode's solution nor other preparations containing soda or bicarbonate of soda. Any cloudiness of the solution which may have been caused by the precipitation of the percaine base by an alkaline solution (or glass containing alkali) is quickly cleared by the addition of a drop of dilute hydrochloric acid. For the preparation and storage of the solution, alkali free glass should be used. Percaine solutions may be sterilised repeatedly by boiling. Adrenalin should be added when sterilisation is completed. It is advisable to prepare the very dilute solutions for injection anæsthesia freshly every day. Repeated filtering of these solutions should be avoided. In a pamphlet issued by The Clayton Aniline Co., Ltd., a *résumé* of the pharmacology and clinical findings is given. Pharmacological investigation of percaine demonstrated the new preparation differs from cocaine and those synthetic local anæsthetics previously used, by its greater efficiency and prolonged action. Percaine solutions of even 1:125,000 have a demonstrable anæsthetic effect on the rabbit's cornea. To obtain a similar effect with cocaine, a 1:10,000 solution must be used. In order to abolish the corneal reflex within five minutes, a minimal concentration of 1:1,000 cocaine is required, whereas 1:50,000 percaine suffices. If 1:1,000 solutions are used, the anæsthetic action of cocaine lasts 55 minutes, but percaine is effective for 130 minutes. The very prolonged action of percaine may also be demonstrated on the exposed sciatic nerve of the frog. When its conductivity has been abolished for 8 minutes by cocaine, the substitution of normal saline causes a return of excitability in from 2-10 minutes. If, however, percaine is employed, the anæsthesia lasts for hours. The intact skin of the frog is in many ways comparable with human mucous membrane, and it resists the passage of percaine, although the sensory nerve endings in it are completely anæsthetised. Consequently toxic absorption is much less to be feared with percaine than when cocaine is employed for surface anæsthesia. In Schleich's method of experimenting with an anæsthetic vesicle (weal), a 1:1,000 percaine solution is quite as effective as a 1:100 cocaine solution. Both produce immediate anæsthesia over roughly the same area, but loss of sensation is much more prolonged with percaine than with cocaine. For local analgesia solutions of 0.25-0.5:1,000 are indicated for application on dressings to extensive burns, large granulating wound surfaces, to lessen itching in infantile eczema, and for repeated irrigation of deep wounds. Washing out the bladder, the rectum or the mouth with these solutions when carcinoma is present produces analgesia lasting many hours. Daily treatment on these lines for many weeks does not produce any toxic symptoms or cumulative phenomena. In the treatment of painful eczemas and ulcers percaine ointments (zinc paste, zinc ointment, etc., with 0.5-1 per cent. percaine) have been of great value. For hæmorrhoids, suppositories of cocoa butter with 0.01 g.

percaine, or hamamelis ointment with 1 per cent. percaine, have given excellent results. Percaine in 1 per cent. solution may be added to the usual pyrogallol applications in the treatment of lupus vulgaris. It may also be used for painting on by Boeck's method and with the salicylic-vaseline applications used for softening scabs.

MEDICINE

Treatment of Veronal Poisoning.—C. A. Johnson, A. B. Luckhardt and J. A. Lighthill suggest ("Journal of the American Medical Association," 95, 8, 576) the promotion of diuresis in cases of veronal poisoning. Experiments with dogs showed a marked shortening of the period of recovery on following, at a brief interval, the administration of soluble veronal with the intravenous injection of 10-per-cent. dextrose solution.

Dermatitis from Insect Powder.—Marion B. Sulzberger and C. Berenda Weinberg report ("Journal of the American Medical Association," 95, 2, 111) a case of dermatitis due to occupational contact with an insect powder containing powdered pyrethrum. The dermatitis was sufficiently severe to have a serious effect on the patient's general health. After considerable preliminary work, it was decided to use the contact or patch test of B. Bloch and M. B. Sulzberger. Various leaves and other substances were tried before it was found that the insect powder produced a severe eczematous dermatitis when applied experimentally to the skin. Local applications were prescribed, and the patient recovered.

Sclerosing Solutions for Varicocele.—D. Levi discusses ("Lancet," 5575, 16) the relative merits of (1) glucose, (2) sodium salicylate, (3) quinine and urethane, and (4) sodium morrhuate as sclerosing agents in varicocele, and gives statistics of mortality, recurrence and chemical gangrene in observed cases. He suggests that it is better to change one's technique if a vein does not become obliterated following one or two injections. Contra-indications are summarised in the monograph.—F. A. E. Silcock, in "The British Medical Journal" (3633, 303), describes the technique that he prefers, and finds that in cases which do not respond to quinine urethane solution, sodium morrhuate in 10-per-cent. solution with phenol 0.5 per cent. invariably works.

Tellurium in Syphilis.—A. D. Frazer reports ("Lancet," 5577, 133) on the use of a 5-per-cent. suspension of tellurium in glucose, injected intramuscularly, in cases of long-continued syphilis. The toxicity of the drug in the doses given appears to be small. No emaciation or discoloration of the skin occurred in this series of eight cases, although both have been reported elsewhere. The most prominent side-effect is a smell of garlic. The drug is excreted as methyl telluride through the lungs and in the urine, and produces an odour which is constant, overwhelming, and extremely persistent. The other side-effects are rare, and in countries where the smell of garlic is not commented on, this drug should prove of great value. In special cases in our own country it may be the only means of affecting the Wassermann reaction.

Protein Milk for Infants.—N. Hill and A. W. C. Mellor advocate ("Lancet," 5583, 398) the use of protein milk, which has long been in use both on the Continent and in the United States as a milk modification suitable for the feeding and treatment of infants suffering from the various forms of diarrhoea and malnutrition. It is prepared, roughly, by rubbing through a fine sieve the dried curd obtained by coagulating a quart of milk with rennet, gradually adding to this curd a pint of buttermilk and making up to the quart with boiled water. Dried varieties are now on the market. The main points to remember when using protein milk are: (1) that it is a "medicinal food" and that infants should not be kept on it for more than six weeks; (2) that saccharine should be used for sweetening purposes at the onset in cases of ileocolitis; (3) that no gain in

The Progress of Pharmacy and Allied Sciences

weight can be expected until sugar in the form of dextrin-maltose is added, and this addition should never be delayed for more than a few days; (4) that although protein milk is a most useful adjunct to infant feeding, it must not be considered as a panacea for every nutritional disturbance occurring in infancy.

Treatment of Erysipelas.—W. H. Ude and E. S. Platou have analysed ("Journal of the American Medical Association," 95, 1, 1) the data in 402 hospital cases of erysipelas. The methods of treatment in these cases were as follows:—(a) Magnesium sulphate and glycerin packs; (b) Röntgen irradiation; (c) ultra-violet irradiation; (d) erysipelas antitoxin; (e) Röntgen irradiation and antitoxin; (f) ultra-violet irradiation and antitoxin. In cases treated by either Röntgen or ultra-violet irradiation, the immediate results were exceedingly gratifying. The return to normal temperature and absence of symptoms took place from three to four days earlier than in cases treated by the magnesium sulphate and glycerin pack method. Ultra-violet irradiation produced a clinical arrest of the disease with the first treatment in 92 per cent. of the authors' cases. Irradiation and antitoxin therapy definitely reduced the total duration of the disease as well as the average duration of the disease after the institution of treatment; and here also ultra-violet irradiation appeared to give the best average results. The authors conclude that the treatment of erysipelas by ultra-violet irradiation may be advocated as a universally applicable method; it is readily available in practically all communities and is devoid of danger, as contrasted with Röntgen irradiation and antitoxin; it usually requires only one treatment, but the treatment may be repeated several times with the least danger; it is inexpensive; the results are somewhat better in their hands than those of any other method of therapy.

OPTICS

Illumination Research.—"The Effect of Distribution and Colour on the Suitability of Lighting for Clerical Work" is the subject of Technical Paper No. 10, Illumination Research (Stationery Office). Experiments were conducted in a specially chosen room with different kinds of lighting arrangements, particulars of which are set out in full together with a series of tests and the results obtained. From these results it was clearly indicated that, for equal lighting intensities, artificial daylight was definitely preferred to light of the colour of that given by a tungsten filament vacuum lamp. A vacuum lamp system with a semi-indirect type of distribution was placed last in order of preference. In the case of full-scale trials, the results obtained were less in favour of artificial daylight. For mixed lighting, however, artificial daylight was definitely preferred, and it was found that the most suitable system was one consisting of diffusing wall-panels and indirect ceiling fittings.

Measuring Particle Size by Ultra-violet Light.—G. S. Haslam and C. H. Hall ("Journal of the Franklin Institute," Vol. 209, No. 6, p. 777) describe new developments regarding the use of ultra-violet light for increasing the resolution obtainable during photographic measurement of extremely fine powders. The equipment used includes a Zeiss ultra-violet microscope with quartz optical system corrected for light of wave length of 2,750 Ångström units. For visible light glass objectives are available. It was found that measurements made by ordinary methods of particles of colloidal dimensions give average diameters too large, due to the presence of diffraction circles. Photomicrographs with ultra-violet light are far more satisfactory with pigments containing a large percentage of particles below the resolving power of a high-power microscope, using monochromatic ultra-violet light (from cadmium electrodes). The original magnification of 1,285 was enlarged to 3,860. Melted dammar is used as mounting medium, care being taken to avoid oxidation and consequent opacity. Still better resolution is expected as quartz objectives reach nearer to the same degree of

perfection as glass lenses. Ultra-violet light has no advantage in dealing with particles coarser than colloidal dimensions.

PHARMACOLOGY

Action of Japan Camphor on the Heart.—K. Tamura, G. Kikura and M. Ishidate ("Proceedings of the Imperial Academy," Tokio, VI, 4) study the fate of camphor in the body and its intermediate product acting as a cardiac stimulant. Experiments led to the conclusion that it is not camphor as such but at least one of its oxidation products, e.g., *p*-oxocamphor, that exerts the stimulant action on the heart. Camphor and its oxidation products in the body so far examined have only depressant action upon the heart, except *p*-oxycamphor. Camphor, when absorbed in the body, is excreted through the kidney as glycuronic acid derivatives (*p*- and *o*-oxycamphor glycuronic acids), except a minute quantity excreted unchanged through the lung. On the way of oxidation *p*- and *o*-oxycamphors are produced and the former seems partly to be further oxidised in the tissues into *p*-oxycamphor, a genuine cardio-tonic substance.

Anthelmintic Action of Oil of Chenopodium.—Dr. A. Hassan and Dr. M. Salah ("Journal of the Egyptian Medical Association," July 1930) have studied the anthelmintic action of oil of chenopodium. Ascaridole appears to be the only native constituent of the oil. Unfortunately, state the authors, there is no known antidote to the drug. The following drugs were tried on animals receiving lethal doses and showing symptoms of intoxication: glucose in moderate dilutions did not affect the condition of the animal; calcium salts as detoxicating and reducing nerve irritability with no result; adrenalin injections were used without any success. Ascaridole appears to be the only constituent of the oil of chenopodium which is active against intestinal worms, especially ascaris. It is a very toxic substance. As the percentage of ascaridole in different samples of the oil might vary, the ascaridole in each sample should be determined, and the dose adjusted accordingly. It is easier and safer to use pure ascaridole with a fixed dose. Weak emaciated patients should be examined carefully, and the drug should be administered to them with extreme caution and in very small doses. The toxic effect of the drug seems to fall mainly on the nervous system producing hyperæmia with its secondary irritative phenomena: attempts at relieving intoxication by using various drugs were of no avail.

Relaxative Hormone.—"Relaxin" is the name proposed for the relaxative hormone of corpus luteum. H. L. Fevold, F. L. Hisaw and R. K. Meyer ("Journal of the American Chemical Society," Vol. 52, No. 8, p. 3340) describe the characteristics and methods of obtaining this substance. The only physiological property of relaxin is its relaxing action upon pelvic ligaments, which facilitates birth of young in animals, and is a striking feature in pregnant guinea pigs. This relaxation of pelvic ligaments requires natural or artificial oestrus as an antecedent, and thus depends upon oestrin working in conjunction with relaxin. Neither hormone can produce the effect alone. The hormone is extracted from corpus luteum by acid alcohol. The hormone is associated with the crystalline material obtained by crystallisation of the evaporated aqueous extract (after removal of proteins, phospholipins, etc.) from glacial acetic acid. One gram of corpus luteum material yields approximately 0.8 gm. of crystalline material consisting largely of sodium chloride. Whether the hormone is crystallised with or merely adsorbed upon the saline is not yet known. The guinea pig unit adopted is the minimum amount of hormonal matter which causes definite loosening of the pelvic ligaments of guinea pigs in full oestrus within ten to twelve hours after a single injection. One gram of the hormonal material purified by picric acid precipitation contains about 28,000 guinea pig units. This product is believed to be a close approach to a pure

The Progress of Pharmacy and Allied Sciences

hormone. The chemical properties of relaxin are comparable to insulin.

PHOTOGRAPHY

Universal All-purpose Developer.—A. Marriage ("Amateur Photographer," March 26, 1930) states that a developer prepared as follows enables those used to developing with pyro to take advantage of it for certain kinds of negatives. It can also be used as an M.Q. developer and for obtaining a variety of contrasts and tones on all development papers and slides. Four stock solutions are required: (1) 10 per cent. each of crystalline sodium sulphite and carbonate and 0.12 per cent. of potassium bromide; (2) 10 per cent. pyrogallol and 2.4 per cent. potassium metabisulphite; (3) 5 per cent. metol and 5 per cent. of potassium metabisulphite; and (4) 5 per cent. hydroquinone and 5 per cent. potassium metabisulphite. Examples are given of combinations for producing various results.

Exhaustion of Borax Developers.—Dundon, Brown and Capstaff ("Communication 405 of the Kodak Research Laboratories") state that the end of the useful life of a borax developer is reached when its degree of exhaustion is such that it causes an apparent loss of exposure on the film, although the desired contrast can still be obtained by longer development. It is suggested that the loss of exposure is caused by the solvent action of the sulphite while the start of development is being delayed by the bromide. The degree of exhaustion of a developer can be quickly determined by dipping an exposed standard strip of film in the developer for a definite short time, and then immersing the strip in a solution which stops development and makes the undeveloped emulsion stable when exposed to light. Such a test has been found to be very reliable.

Photographic Latent Image.—Photo-conductance phenomena in silver halides are described and discussed by F. C. Toy and G. B. Harrison ("The Proceedings of the Royal Society," June, 1930). Their experiments prove that a photo-current begins to flow practically simultaneously with the incidence of illumination. The current is proportional to the amount of light and attains its final value for constant illumination within a few hundredths of a second. This photo-current increases with lowering of temperature, whereas the electrical conductivity in the dark (probably electrolytic) falls off with decrease in temperature. It is suggested that the photo-current is due to electrons, bromine ions being free from silver bromide by photo-electric action. It is suggested that these ions react with neighbouring molecules, such as gelatin, to leave silver atoms effectively free to form the latent photographic image.

Testing for Sodium Thiosulphate.—Crabtree and Ross ("Communication 412 of the Kodak Research Laboratories") describe a method of testing for the presence of sodium thiosulphate in motion picture film, which consists of placing strips of processed films in the following mercuric chloride-potassium bromide solution:—

Mercuric chloride	25 gm.
Potassium bromide	25 gm.
Water	to 1,000 c.c.

If the film contains an appreciable quantity of sodium thiosulphate the solution becomes opalescent, the turbidity being roughly proportional to the quantity of hypo present. It is possible to detect the presence of 0.05 milligrams of sodium thiosulphate (crystals) in motion picture film by this test. Some of the factors which determine the rate of fading of silver images have been outlined, and the critical hypo content, and degree of washing necessary with negative and positive motion picture film to insure stability have been indicated. Under ideal conditions it is necessary to wash thoroughly fixed motion picture negative film for thirty minutes, and motion picture positive film for twenty minutes in order to eliminate the hypo. Under practical conditions the times are greater according as the conditions differ from the ideal.

VETERINARY MEDICINE

Avertin Anaesthesia in the Cat.—J. G. Wright ("Veterinary Journal," July 1930) states that consistent results have been obtained in forty cases. With the dosage of 0.3 c.c. per kgm. body-weight, in animals under six months old, narcosis is not so deep as in animals over that age. Complete surgical anaesthesia is present in about 50 per cent. of cases and in others it is necessary to augment Avertin by a few whiffs of CHCl_3 . No restraint is ever necessary. The drug is administered in 3 per cent. solution in distilled water at 40° C., via the rectum into the colon. In the great majority of cases the patient has been in no way prepared; but it is advisable to withhold food for six hours prior to injection, and in cases where the rectum is packed with hard faeces a dose of castor oil twelve hours previously. In cases of excessive weight due to fat the dose should be reduced to 0.2 gm. per kgm. body-weight.

Acute Coryza of the Cat.—R. Larrat, in a thesis on this subject ("Revue Vétérinaire," April 1930), deals with the different methods of treating the complaint. The sick cat should be put in a warm, airy place, free from draughts, the nostrils being cleaned with warm boric acid solution, 1 per cent., and two medicated inhalations given daily. In the congestive stage of coryza prescribe 1 in 1,000 adrenalin solution or aconitine, which are powerful decongestives. If these abortives do not produce results apply mustard plasters to the neck, shoulders, chest and kidney region; inhalations to be often repeated. Different complications must be rationally treated. The author states that good results in the treatment of this disease have been obtained by syringing out the mouth with a weak solution of chinolol and glycerin 1 per cent. ammonium chloride solution, or a little hamamelis solution in warm water, and also trickling any of the above solutions down the nostrils with an eye dropper.

Roundworms in Pigs.—E. F. Becket ("Veterinary Journal," June 1930) finds chenopodium oil the best treatment for this complaint. It was administered in the form of a capsule, but as vomiting occurred in 30 per cent. of cases this method was discarded. It was next tried by being fed in the food—the pigs being fed individually—again vomiting was the trouble, coupled with the fact that a number of animals refused to finish the food even after being fasted. The method now in use is to drench the animals, and is carried out as follows:—The animals are fasted for twenty-four hours; the dose being 15 minims for every 25 lb. A table of doses for use in the field, which has been continually used and found safe and efficient, is as follows:—

Age	Dose	Age	Dose
8 weeks	... 20 minims	16 weeks	... 40 minims
10 weeks	... 25 minims	6 months	... 5j.
12 weeks	... 30 minims	9 months	... 5ss.
14 weeks	... 35 minims	12 months	... 5ij.

For even very large pigs it is suggested that whatever the weight the dose should not exceed 2 fluid drachms, although the writer uses 2½ fluid drachms for large sows and 3 drachms for large boars. The drug is added to a full dose of either castor oil or liquid paraffin. The dose is then well shaken up in 4 oz. of milk or whey and the animal drenched. Linsced oil, instead of castor oil or liquid paraffin, lowers the expense considerably, and seems to be quite as efficient. The pigs are usually dosed in the morning following the twenty-four hours' fast, all food and water being withheld until the afternoon, when a small sloppy meal is given. Only one death has occurred among 600 pigs treated, and this four days after administration of the drug. This method has been very successful, as in only a small number has vomiting occurred. In some cases where it is considered necessary to repeat the dose owing to vomiting, a little milk given before the drug will prevent a sensitive stomach reaching, and in others chlorotone gr. v. may be useful.

Gifts as Aids to Sales

By Lex

At a time such as the present, when trade and industry are in a state of extreme depression, anyone who can assist in providing a new outlet or widening an existing outlet for goods deserves to be listened to with the most sympathetic attention. Hence the claim on the nation's gratitude of the contriver of a successful mode of advertising. The advertising expert is our modern counterpart of the ideal ruler mentioned in "Gulliver's Travels"—the ruler who makes two blades of grass grow where before there had only been one. It is in this spirit of friendly receptiveness that we ought to approach any novel scheme for advertising, however unconventional it may at first sight appear. One of these schemes which has of late come much into vogue has been the subject of many letters from readers of THE CHEMIST AND DRUGGIST, viz., the practice of offering to customers some article in the form of a "free gift" as an inducement to make larger or further purchases. It may be taken that the system had its beginnings in an effort to get purchasers to continue their custom to the firm making the so-called gift. It has since tended to develop along the lines of becoming an inducement to purchasers to buy something which they would otherwise not buy. Thus we have coupons with certain articles sold, it being understood that the holder of a number of the coupons will be entitled to claim some article by way of gift or bonus. And from this, by quite a natural transition, we come to the stage at which it is proclaimed that the purchaser of a number of articles at their publicly quoted price shall be entitled to claim free of cost one or more articles of a like kind in addition to what he is admitted to have paid for. The practice in its various phases is suggestive of a crude and rather undignified scheme to induce customers to believe that they are getting something which in fact they are not getting. If a "gift" of A can only be acquired by purchasing B and C, then the so-called gift is in reality no gift at all, but is paid for by the money expended in payment for B and C. The surprising feature of the case is that the purchaser often does not recognise the fact. The obtuseness of vision in this respect may perhaps be taken as an illustration of the tyranny of words over the human intelligence. The description of something as a gift is thought to justify the view, in the face of the clearest evidence to the contrary, that nothing is paid for the article so described. Those who analyse the practice closely will be struck with the points of resemblance it shows to some well recognised systems of co-operative trading. Members of a co-operative society have an incentive to trade with the body in the fact that they will receive out of the trading profits a bonus depending on the surplus arising out of the communal trading, the sum paid to them varying according to the extent of their purchases. In the case of a "free-gift" scheme a similar distribution of trading profits is made, but only in conformity with a specific agreement with the purchaser, and not, as in the case of the co-operative society, in virtue of the relation in which each member stands to the body. Whether this novel practice is anything more than a fashion, and like all other fashions destined to pass away, must be left to time to show. Should it take a permanent place in our trading life we must assume that it met some genuine commercial need, and attention should be directed rather to remedying the abuses of which it is capable. It clearly enough holds out an inducement to individuals to make purchases to an extent greater than their needs demand or their circumstances would justify. It might also be used as a means of cutting trade profits to a degree which would inflict hardship on traders whose business is not on a scale sufficiently large to place them in a position to afford the fraction which would be cut off. Whatever conclusion may be eventually reached upon the system, there can be no doubt that the results of its operation call for close scrutiny in the meantime.

The Sale of Trusses

AN interesting lecture and demonstration on *Trusses and Surgical Appliances* was delivered by Mr. R. Hayward, of S. Maw, Son & Sons, Ltd., at a meeting of the West Ham and District Association of Pharmacists, held in the Church Institute, Stratford, on September 23. Mr. H. S. Aplin, president of the Association, occupied the chair. Mr. Hayward said that at the present time there seemed to be a good deal of discussion among pharmacists as to what was a chemist and druggist, and chemists were looking for lines of business which would emphasise their status. Business in trusses and surgical appliances had not yet been claimed by any other section of traders, and it had not even been appropriated for the purpose of gifts, in exchange for cigarette coupons. The chemist's shop should be the natural depôt for the supply of such goods, and the public should turn to the chemist when they needed trusses or surgical appliances. As a rule, people requiring these were shy, unless they could see some indication that they were likely to get what they wanted, and it was a good thing for the chemist to make a display in his window. The average chemist's window, however, did not convey to any great extent the impression necessary. Mr. Hayward pointed out that one of the biggest multiple shop concerns set the rest of the chemists an excellent example which they might emulate. It should be remembered that a reputation for supplying trusses and surgical appliances necessarily induced a demand for many other articles quite easy to handle. Chemists dealing in the articles under consideration would find it useful to cultivate the patronage of local doctors. Theoretically, these thought that the fitting of trusses or surgical appliances should be done by a medical man, but often enough the local practitioner was very glad indeed to call on the services of someone who would do the actual fitting. It was a good thing to get in touch with benefit societies. The requirements for fitting were not very much, and could be very easily arranged, but perhaps a little knowledge of anatomy was required, and it was advisable to have a woman assistant within call, or to arrange for the attendance of a woman fitter or nurse at certain times of the day. For window display it was usually sufficient to use an elastic stocking on a limb and trusses or other surgical appliances to give the necessary professional touch, while a show-card should be used to indicate that fitting was done on the premises. It was the function of a fitter to supply the appliance which the surgeon prescribed, and in any difficulty the matter should be at once referred back to the medical man. Alluding to the incidence of hernia, Mr. Hayward said that most of the men's cases required trusses, whereas the women's were most effectively treated by the use of belts. It should not be overlooked that a truss was not a cure, but something which certainly might produce an improvement, or at any rate prevent the trouble getting any worse. In spite of the claims made by certain people, other than pharmacists, it was advisable to explain to patients that a truss could control but not cure hernia. By exhibiting a varied collection of trusses, whose advantages he carefully indicated, Mr. Hayward was able to explain the best methods of fitting patients, and he also gave some useful hints on the manner of approach which should be cultivated by chemists in dealing with such cases. At the close a cordial vote of thanks to the speaker was carried with acclamation on the proposition of Mr. F. R. Maxey, seconded by Mr. W. T. Graham.

THE Ministry of Health has issued a new list (No. 35) of approved arsenobenzene compounds.

A CRITICAL REVISION OF THE GENUS *EUCALYPTUS*.—Vol. VIII, Part 3, Part LXXIII of the complete work, has recently been issued, price 3s. 6d., published by the Government of the State of New South Wales.

OBVIOUS.—A woman went to a doctor and complained that she felt tired and worn out. Said the doctor: "Let me see your tongue."—"Sunday Chronicle."

Business Changes

TIMOTHY WHITES (1928), LTD., have opened a pharmacy at 16-17 Cliffe High Street, Lewes.

BOOTS, LTD., have acquired the business of A. W. Hankinson & Son, The Pharmacy, Grange-over-Sands.

MR. H. K. WOODWARD, chemist and druggist, has opened a new pharmacy in Commercial Street, Halifax.

THOMAS TOMLINSON & SON (S. TAYLOR, F.N.A.A.), chemists' valuers, have removed to 46 Victoria Street, Manchester.

MR. J. V. JONES, chemist and druggist, has acquired the business of Mr. H. Mills, chemist and druggist, Collingham, Newark, Notts. [Corrected note.]

MR. CECIL B. LEE, chemist and druggist, formerly Scottish representative of W. B. Cartwright, Ltd., is opening a pharmacy at Powiss Terrace, Kittybrewster, Aberdeen.

MR. ROBERT TELFORD, manufacturers' agent, 67 Carlton Place, Glasgow, has been appointed Scottish agent for Eugene Rimmel, Ltd., Breidenbach & Co., Ltd., and Pastilles, Ltd.

Trade Notes

BOB MARTIN, LTD., Southport, has placed on the market Martin Milk, a food intended for dogs, puppies and cats.

PRICE REDUCTION.—Pond's Extract Co., 103 St. John Street, London, E.C.1, inform us that the price of Pond's beauty box will be reduced on October 1.

G. LEMOINE, LTD., 129 Regent Street, London, W.1, are the distributors in this country of the perfumery products of Jean Patou, 9 Rue Saint Florentin, Paris.

GLOSSETTES.—Ernest Jackson & Co., Ltd., Crediton, and Plantain Place, Borough, London, S.E., are offering a window show bonus in connection with their popular liquorice and menthol pellets.

CALENDARS.—Allen & Hanburys, Ltd., Bethnal Green, London, E.2, give on another page an illustration and the price of their calendars for 1931, overprinted with the chemist's name and address. The edition is a limited one.

CYONA SOAP.—Cyona Co., Ltd., Didcot, Berks, make a soap, the sale of which is exclusive to chemists. Berkshire Ovals, as the tablets are called, are wrapped in transparent paper and packed in dozen boxes, which form attractive show outers.

A. DE ST. DALMAS & CO., LTD., Leicester, inform us that their buyer, Mr. G. F. Moore, will be in attendance at their London office, 6 Great Sutton Street, E.C.1, the second and fourth Thursdays in every month, commencing October 9, for the purpose of seeing new and up-to-date lines.

THOMAS KEATING, LTD., Station Mills, Billingshurst, Sussex, have appointed, from September 30, Eucryl, Ltd., Shirley, Southampton, as their selling agents in Great Britain and the Channel Islands. Harwood Brothers, Ltd., Dublin and Belfast, are the distributors for the Irish Free State, Northern Ireland, and the Isle of Man.

A. & M. ZIMMERMANN (Petri Brothers, Ltd., proprietors), 3 Loyds Avenue, London, E.C.3, have been appointed sole concessionaires in the United Kingdom for "S.A.P.I.C." products for the leather and textile trades, manufactured by "La Société Anonyme pour l'Industrie Chimique à Saint-Denis," Ile Saint-Denis (Seine), France.

RHEUMOGEN SPECIALITIES.—Burgoyne, Burbidges & Co., Ltd., announce that Mr. K. J. C. McLennan (Rheumogen, Ltd.) having joined the directorate, the manufacturing and distributing of all Rheumogen specialities will in future be carried on at Messrs. Burgoyne's East Ham works, and all orders for these specialities should be addressed to them.

OPTICAL QUALIFICATIONS.—Mr. C. A. Scutt, F.S.M.C., F.B.O.A., chemist and druggist, High Street, Barnet, prepares students for either of the optical examinations by correspondence courses, supplemented by practical work at the candidate's convenience. Among the advantages of this form of tuition are that the study can commence at any time, and the duration can be adapted to meet individual requirements.

Trade-Mark Applications

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary," 1930, p. 341.

(From "The Trade Marks Journal," August 27, 1930.)

"PARSETIC"; for all goods (3). By Parke, Davis & Co., Foot of McDougall Avenue, Detroit, Michigan, U.S.A. 514,276.

"EFFECTOL"; for medicinal chemicals (3) and for perfumery, etc. (48). By C. W. Collinson, "Simbo," Stag Lane, Kingsbury, London, N.W.9. 514,389/390. (Associated.)

"EDWENIL"; for all goods (3). By E. H. Spicer & Co., Ltd., 72 Wigmore Street, London, W.1. 514,601.

"OHROPAX"; for surgical apparatus (11). By M. Negwer, Jägerstrasse 40, Potsdam, Germany. 514,377.

"PAM" with label design incorporating girl in traditional Dutch costume; for sanitary pads (11). By C. G. Froom (Sales Service), 47-48 Berners Street, London, W.1. 513,996.

"RACIAL"; for surgical instruments (11). By The Society for Constructive Birth Control and Racial Progress, 108 Whitfield Street, London, W.1. 514,903. (Associated.)

"SCHWEPPE'S LEMON SQUASH" with label design including fruit design (Fruit devices disclaimed); for lemon squash (42). By Schweppes, Ltd., 1 Connaught Place, London, W.2. 506,474. (Associated.)

"POND'S SKIN FRESHENER" with label design: for a liquid skin preparation (48). By Pond's Extract Co., 103 St. John Street, London, E.C.1. 513,614. (Associated.)

"UTILICON"; for containers (50). By Universal Seamless Containers, Ltd., Bush House, Aldwych, London, W.C.2. 513,012.

(From "The Trade Marks Journal," September 3, 1930.)

"VETUS"; for animal medicines (2). By Vetus Products, Ltd., 15a Duncan Street, Edinburgh. 512,060.

"PEPTO-MANGAN" for all goods (3). By M. J. Breitenbach Co., 160 Variek Street, New York, U.S.A. 511,895.

"MASCOT CURES CATARRH" with device of hand and words "The Little Finger Tip Dose"; for inhalants for catarrh (3). By T. Harley, 55 South Methven Street, Perth. 512,835. (Associated.)

"BINGE"; for a medicine (3). By Avon Chemicals, 6 Little Park Street, Coventry. 513,080.

"PHENYMOL"; for medicine (3). By The Standard Tablet Co., Ltd., Newtown Road, Hove. 513,480.

"BEECHAM'S LAXO" ("Laxo" disclaimed); for laxative pill sweetmeats (3). By Beechams Pills, Ltd., Veno Buildings, Chester Road, Manchester. 514,259. (Associated.)

"TREETABS"; for all goods (3). By Daimisch Pharmazeutische A.G. Bad Homburg, 25 Daimlerstrasse, Frankfurt-on-Main, Germany. 514,410.

"DAVINA"; for surgical bandages for the face (11). By W. Stevens & Co., 31 East Hill, Wandsworth, S.W.18. 511,320.

Marriages

BURROWS—SCALES.—At Wesley Hall, Whitby, on September 9, Wilfred James Burrows; chemist and druggist, to Olive Scales.

DOUGLAS—GASS.—At the Parish Church, Benwell, Newcastle-on-Tyne, on September 15, Fred Douglas, chemist and druggist, to Catherine Gass.

EASTLAND—READ.—At Holy Trinity Church, Ramsgate, on September 15, Walter William Eastland, chemist and druggist, to N. C. Read.

GRANT—MACE.—At Berwick-on-Tweed, on September 17, Edgar Beattie Grant, Ph.C., to Mary Mace, Ph.C.

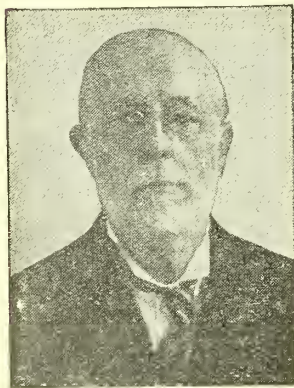
HOLLAND—WELLINGS.—At Park Green United Methodist Church, Macclesfield, on September 15, Frederick Alfred Holland, chemist and druggist, Macclesfield, to Esther Wellings.

RUTHERFORD—JACK.—At the Palace Hotel, Aberdeen, on September 19, Andrew Rutherford, chemist and druggist, Oban, to Elsie Jack, chemist and druggist, second daughter of Mr. James Jack, Rothes.

WILSON—BROWN.—At Christ Church, Bath, on September 18, Luther Alick Wilson, chemist and druggist, son of Mr. Luther Wilson, chemist and druggist, Brock Street, Bath, to Daisy May Brown.

Deaths

WILLS.—At Merthyr Tydfil, suddenly, on September 22, Vincent Andover Wills, J.P., chemist and druggist. Mr. Wills, who was born in London, qualified in 1877, and commenced business as a chemist and druggist in Merthyr fifty-three years ago. Mr. Wills had previously had one or two seizures, but upon recovery he devoted himself to a variety of duties, and only on the previous Thursday he paid a visit to Cardiff. On Monday he was in his shop when he was taken with the final seizure. He was conveyed into the adjoining room, where he expired. Among the many public offices he has held, Mr. Wills



Mr. V. A. WILLS

was for twenty years a member of the old Merthyr School Board, and for fifteen years a member of the Merthyr Board of Guardians. He was also a member of the old Merthyr Urban District Council, and was chairman of that body in 1898. Mr. Wills was a member of the Court of Governors of the University of South Wales and Monmouthshire. He was a member and past-chairman of the Merthyr Insurance Committee and chairman of the Merthyr Pharmacists' Association. Mr. and Mrs. Wills celebrated their golden wedding in August 1929. Mr. Wills is survived by a widow and a grown-up family. Sympathetic reference was made to his death at a sitting of the Merthyr Police Court on September 23.

BANTON.—At Worcester, on September 8, Richard Etheridge Banton, chemist and druggist, aged twenty-four.

BLACK.—At "Medway," Beattie Avenue, Cardiff, on September 8, Charles Jeffrey Black, chemist and druggist, aged sixty-five.

GOLDEN.—At 26 Stockport Road, Levenshulme, Manchester, on September 14, Alfred Percival Golden, M.P.S. Mr. Golden passed the Minor examination in 1887. He is survived by a widow and two children, Miss C. S. Golden, M.P.S., F.B.O.A., and Miss C. M. Golden, M.P.S.

RODGER.—On July 16, David Rodger, minister of the Presbyterian Church, Bell, Queensland, Australia. The Rev. Rodger passed the Pharmaceutical Society's Minor examination in 1903, and was at one time dispenser at the Edinburgh Royal Infirmary.

SIMPSON.—At Louth, recently, Henry Higson Simpson, chemist and druggist. Mr. Simpson was Mayor of Louth in 1928 and was preceded in that office by his father and by his great-grandfather, while his grandfather was also a member of the town council. In addition to his municipal appointments Mr. Simpson had been a governor of the grammar school and had held office on various local bodies. He passed the Minor examination of the Pharmaceutical Society in 1899.

WALLBRIDGE.—On September 22, Clara Elizabeth, the wife of Mr. J. G. Wallbridge, chemist and druggist, 227 Kensington Liverpool, aged sixty-eight.

Personalities

MR. CYRIL H. DAVIES, chemist and druggist, was general secretary of the committee which organised the recent successful Abertillery 'shopping week.'

MAJOR L. B. HOLLIDAY, O.B.E., of L. B. Holliday & Co., Ltd., Huddersfield, has been appointed a member of the Dyestuffs Advisory Licensing Committee in place of the late Mr. E. Hickson.

ON DR. G. CLARIDGE DRUCE's eightieth birthday the Viscount Grey of Fallodon handed him a cheque from the members of the Botanical Society and Exchange Club of the British Isles. This Dr. Druce said might be used to purchase a portion of land for the preservation of a rare species. This it has been found impossible to obtain, so the well-known artist, M. de Lazlo, has consented to paint a portrait of Dr. Druce, which will be destined for a public body.

Wills

MR. GEORGE RICHARDSON, of Garleton, The Crescent, Coundon, Durham, chemist and druggist, left estate of the gross value of £1,421 16s., with net personalty £580 19s.

MR. WILLIAM JOHN BRAY, of 10 Gloucester Road, Teddington, retired chemist and druggist, for many years in business as Bray & Co., at 30 Broad Street, Teddington, who died on January 16 last, left estate of the gross value of £1,560 7s. 2d., with net personalty £1,514 16s. 2d.

MR. JOHN WILLIAM MCINTOSH, of 217 Laburnum Grove, North End, Portsmouth, formerly of 325 Fratton Road, Portsmouth, chemist and druggist, who died on March 3 last, aged fifty-five, left estate of the gross value of £6,299 15s. 9d., with net personalty £891 4s. 1d.

Information Department

INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated.

E/39. Bravo toilet paper	H/239. Stanilave
A/249. Embutol	A/129. Summit brand D. & H. enamelled ironware
B/249. Imperial cattle drinks	N/239. Zebra toilet brushes
H/249. Neptune toilet rolls	

Observations and Reflections

By Xrayser III

Non-Attendance

of councillors at meetings of the Council of the Pharmaceutical Society of Ireland has often struck me when reading your reports of such meetings, and the protest of "Limerick" (*C. & D.*, September 20, p. 379) appears to be fully justified in view of the important happenings with which Irish pharmacists may soon have to contend. There is a draft Pharmacy Bill under consideration, and vigorous opposition to this in the Dail, presumably by non-friends of pharmaceutical aspirations, is anticipated. It is only reasonable therefore to assume that every member of the Council would be anxious to take his part in the conduct of affairs, particularly as an election time is approaching. Yet there were numerous absentees on the occasion of the last meeting of the Council (p. 363), at which consideration of the Government draft proposals took place. As a mere looker-on, this seems to me contrary to that regard for the common good which ought to actuate all elected representatives, and it would not surprise me to find that my view is shared by many members of the Irish Society when they come to record their votes at the approaching election.

Northern Ireland

should, presumably, be able to start its National Health Insurance dispensing service at a point where advantage can be taken of all the experience that has been gained in working the system in Great Britain. It is interesting to note, therefore, how little is the variation in the scheme set out in the Ministry of Labour letter (*C. & D.*, September 20, p. 365) from that which prevails here. I am not surprised that the Scottish arrangements for the payment of chemists should have been selected in preference to that prevailing in England and Wales, and it seems wise that the pricing of prescriptions should be done at the Scottish Pricing Bureau, where similar work has been done so satisfactorily for a prolonged period. Northern Ireland pharmacists may be expected to appreciate the fact that the prescription forms are to be in duplicate, and to have a two-mile limit for cases where the doctor has the right to dispense. I observe, by the way, that Mr. Culbert stated, at the meeting of chemists called to consider the conditions of the new service, that advertising is not prohibited, and I think this is rather a pity. Whilst I see no particular harm in letting a chemist announce, as he will, that he is prepared to dispense prescriptions for insured persons, anything beyond this in the nature of advertising ought to be deprecated, if only as tending to cause ill-feeling between brethren in the craft.

Swansea Chemists

appear to have been up against somewhat unusual circumstances in connection with the closing of the pharmacy department at the local technical college (*C. & D.*, September 20, p. 74), and I think they have been well-advised to issue for publication the statement to which you give currency. It might have been anticipated that some feeling of resentment, however slight, would have influenced them when faced with the loss of educational facilities in their own town; but it is gratifying to observe that the excellent arrangements understood to exist at Cardiff satisfy them in the circumstances, and that they fully concur in the decision of the Council of the Pharmaceutical Society. Incidentally, it often occurs to me, when I reflect upon the few educational centres which used to cater specially for pharmaceutical students, whether recognition is not now being granted to an excessive number of centres. It is, of course, pleasant to contemplate a state of affairs where pharmaceutical students can com-

plete their studies in any town where there is a technical school; but unless the number of students in any town is likely to be sufficiently big to justify first-class equipment, the case for a special pharmaceutical department does not seem to be justified.

No Operation

in the chemical laboratory is charged with more interest for the chemist himself and his observers than that of distillation. On his first introduction to the science the chemical neophyte tingles with expectation until he is permitted to carry out a distillation experiment on his own account. Your note on stills in this week's "Commercial Compendium" (p. 382) well indicates that this process had beginnings in far-off days. Herodotus, Pliny and Dioscorides describe distillation processes for the production of turpentine oils. An example of the method used in the time of Pliny is to be found in the fifteenth book of his Natural History where he says, in the words of Philemon Holland: "Now for the oil of Pitch, which they call Picinum, it is made of the vapours and smoke that arise from Pitch whiles it boileth, and received in fleeces of wool spread over the pot's mouth, wherein the said Pitch is sodden; which fleeces are afterwards well wrung, and the oil is pressed out thereof." The art of distillation made considerable progress before the time of Geber (Jabir ibn Hayyan), if we may rely upon the ascription to him of the *Summa Perfectionis Magisterii*. In this work there are descriptions of the several kinds of furnaces employed in his laboratory, and in the edition printed at Berne in 1545 are drawings of these; among them is the distilling apparatus. It may be assumed, therefore, that in the eighth century distilling was quite efficiently accomplished, and by the tenth century its technique had so far advanced that Abulcasis (Abu'l-Qasim uz-Zahrawi) was able to describe, in his *Liber Servitoris*, a compound still-head by which means a sort of fractional distillation could be carried out.

The Ingenuity

of those early adepts was very great, as appears from the great variety of forms of alembics shown in their drawings. It may be true that some of these never materialised, but a consideration of them compels one to see that the contrivers of them really apprehended that the liquids upon which they operated might contain many volatile matters, and that of these some might be extraordinarily elusive and escape altogether unless clever "traps" were devised to secure them. The art of distillation previous to the sixteenth century was gathered into a famous book by Hieronymus Brunschwyg—entitled "*Liber de arte distillandi de simplicibus*"; this contains descriptions and illustrations of the different utensils for the still house. The first volume of it appeared in 1500. At a later period in the same century another volume was printed, of which a part was devoted to the distilling apparatus then employed; it is the "*De Simplicium medicamentorum*" of Pierandrea Mattioli (the commentator on Dioscorides) which was published in 1571. He describes six forms; three of them are constructed with a water bath, and two of them are for multiple distillations. Two or three of his drawings have been copied in recent treatises on this subject. In the several parts of these old stills the materials, other than the furnaces, glass, tin and copper or bronze (*aes*) were used. Abulcasis employed glass alembics. A better known book than the one just mentioned, in which may be found a pretty full account of distillation methods, is the "*Furni novi philosophici*" of Glauber. In an English dress it will be found under the name of Christopher Packe (1689); it was also translated by J. French.



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Editorial Articles

Gift Schemes

ONE of the most remarkable developments of modern business methods is that involving the enclosure in packets of branded goods of coupons, a specified number of which entitle the holder to receive from the maker of the goods a gift. Makers of proprietary cigarettes have carried this device for increasing sales to extreme lengths, the value and nature of the gift varying according to the number of coupons collected and returned, printed lists being supplied to show the number and variety of the gifts obtainable. Naturally, the goods offered as gifts are in a totally different category from those usually sold by tobacconists, so that in effect the gift schemes involve encroachment by tobacconists upon the business of dealers in other classes of goods, and each gift received by a purchaser of a particular brand of cigarettes may be regarded as taking the place of a similar article sold by the legitimate dealer. In other words, by the distribution of gifts to consumers of their wares, cigarette-makers are reducing the volume of business done by legitimate retailers of the goods handed over as gifts. They are, in addition, favouring particular makes of goods as gifts, so that manufacturers of other kinds find their business affected as well as that of their retail customers. Meanwhile, the general impression created by the gradual expansion of this pseudo-philanthropic method of increasing business has been that there must be very great profits in the cigarette-making business, and that it was a pity the apparent benevolence of the manufacturers could not be manifested by a reduction in the prices of their products, instead of a distribution of articles which the public would be better left to purchase for themselves when required. But a reduction in price would affect every packet of cigarettes sold, whereas many of the coupons enclosed in packets are not utilised for obtaining gifts, so that the total amount per packet to be debited to the gift-scheme account is probably much smaller than an appre-

cialable reduction in the price per packet. There may be other practical reasons for presenting gifts to consumers instead of reducing prices, such as the existence of price-maintenance agreements, but the fact remains that the gift schemes have increased in number, as one manufacturer after another has felt it incumbent upon him to do something to prevent his rivals from capturing an inordinate share of the existing business. And now we find that makers of other classes of goods are following suit in the endeavour to secure increased consumption for their products. Two of the leading chocolate makers have put forth gift schemes similar to those of the cigarette manufacturers, and last week correspondents of THE CHEMIST AND DRUGGIST directed attention to modified schemes in the working of which the co-operation of chemists and druggists is being sought. In one instance each tin of a certain denture-cleaning powder contains a coupon which entitles the purchaser of the tin to obtain a dental-plate brush free of charge. As our correspondent points out, this enables a customer who requires such a brush to avoid purchasing the article, with consequent loss of the retailer's profit on the sale that might have been. The other instance to which our attention is directed is that of an offer emanating from a firm of soap makers, who seek to increase their output by presenting an extra tablet of their soap free to every purchaser of two tablets. So far as we can gather, the chemist will receive payment at the ordinary rate for the two tablets sold, as well as for the tablet given away. But he must have placed an order for a much larger quantity of the soap than he would normally order, and risk having a large portion of it left on hand, after giving free window space for a display, and obtaining signatures from customers to facilitate the working of the manufacturer's scheme. This kind of business may possess charms for some classes of retail dealers, but it can hardly be expected to command itself to chemists and druggists, and we should expect to find our readers disposed generally to turn down gift schemes of every description. By so doing, however, they naturally risk loss of business, and we can understand why the idea of retaliation should have occurred to one of our correspondents. There is undoubtedly something fascinating about the idea of retaliation, and it would not surprise us greatly if manufacturers and retailers who have suffered by the loss of business caused by free-gift schemes were to combine for the purpose of retaliation. Whether chemists and druggists could retaliate effectually upon distributors of free supplies of chemists' articles must depend upon the extent to which a number of them could work together. Doubtless in theory the thing could be done, but the point is whether a sufficient number of chemists could organise to make a retaliatory scheme effectual. There are towns where the chemists are sufficiently well organised for the experiment to be worth trying, and we should imagine that one successful experiment of this kind would soon be copied in other parts of the country. Not only so, but having proved their strength when united, the chemists who retaliated might not unprofitably decide to co-operate for the attainment of other desired ends. Meanwhile, however, the great desire of chemists generally must be to avoid entanglement in gift schemes and at the same time to avoid loss of business.

The Linseed Oil Outlook

It is as yet premature to look for any definite indication of a revival of genuine activity in linseed oil, although market fluctuations during recent weeks have been more restricted, following the substantial set-back which took place over the spring months. The trade demand has remained to a large extent under the influence of the world-wide depression, which has seriously affected the outlet for practically all so-called vegetable oils. The difficulties of the seed-crushing industry have been very acute in the course of this season, and in the case of linseed oil, the home mills have been badly handicapped by severe Continental competition, and the inflated cost of raw material experienced over a long period into the early months of the year, consequent upon fears of the partial failure of the Argentine crop. Since then a good many things have happened calculated to modify market views in the way of a gradual adjustment between supply and demand. Important subduing influences were already alluded to when we discussed the linseed shortage in our issue of April 12 (p. 458). It was then pointed out that consumers were but little inclined to buy in excess of their requirements, especially in view of dull trade and the possibility of a large increase in the spring sowings in North America. As then intimated, there was obviously more inducement for farmers on account of the slump in wheat to devote as much of their acreage as possible to linseed, especially in the United States, under the high protective duty against imports of foreign seed. At one period last month, there was a temporary sharp spell of speculative buying of linseed, which was also reflected in the oil-product under the influence of advices of crop damage through drought in America, but at the recovery in values much freer offers of seed were attracted, not only from India, but also the River Plate, particularly for near shipment. Reports of damage proved to be exaggerated, and although the early forecast of a "record" American yield has been modified into a prospective out-turn of about 650,000 tons, this would indicate an excess of approximately 230,000 tons over last year's yield. A much better yield is also expected in Canada, and it is estimated that between the two sources of supply, the aggregate out-turn should be about double that of the previous season's resources. Obviously America has relaxed her takings from the River Plate to a considerable extent, while her trade needs have undoubtedly suffered an appreciable contraction in consequence of the seriously impoverished consuming conditions. A still more important factor is now dominating the international market, this being the huge increase in the Argentine sowings for the new season. Recently official returns placed the areas under cultivation at over 7,500,000 acres, but since then the sowings appear to have been further considerably enlarged; and the total has been placed at 8,500,000 acres, while the latest reports state that the condition of the plant is excellent. At any rate, subject to normal weather conditions being experienced until the beginning of the harvest, there is little doubt that a new high record yield will become assured. The fact may be recalled that last year 7,150,000 acres were sown, but only 5,300,000 acres actually harvested, the yield being only 1,397,000 tons, of which approximately 950,000 tons have been shipped. It is well to bear in mind, however, that a considerable surplus of the previous crop was still available at the close of last year. There is certainly a very good prospect of large supplies for next season, and in the present attenuated state of world-consumption, there is but little fear of any actual shortage over the remainder of this year, or until shipments of the forthcoming Argentine crop begin. The accession of supplies to

this side this year from the River Plate has been abnormally restricted, as indicated by returns below.—

U.K. imports (tons)	1929 Aug.	1930 Aug.	1929 Jan.-Aug.	1930 Jan.-Aug.
From Russia	—	—	—	—
„ Argentina	9,231	2,328	181,798	72,197
„ British India ..	7,001	12,721	23,319	51,590
„ Other countries ..	63	68	7,329	3,503
Total	16,295	15,117	212,446	127,290

It will be seen that the receipts from Argentina show a deficit of about 109,600 tons for the eight months against a year ago; and although our supply from India was considerably increased, the decrease from all sources represents over 85,000 tons. This means, of course, that the home make of linseed oil has been much curtailed under prevailing difficulties, but this was made up to a large extent by the much heavier imports of Continental oil, totalling 33,593 tons, or practically double those for the same period last year. The London spot price of linseed oil lately declined to £31, rallying to £31 10s. per ton. This compares with the average for September last year of £43 12s. 6d., but only £29 for April and May in the same year. Argentine linseed has been selling latterly at around £14 per ton, against an average of £23 8s. 9d. for September, 1929, but the fact may be recalled that the average for the same month a year before was only £15 7s. 6d., with linseed-oil averaging £29 5s. per ton naked, ex mill.

A Legal Definition

ANY decision given by the Supreme Court of Washington, U.S.A., though not necessarily applicable or even relevant in similar circumstances in the United Kingdom, claims careful consideration as a matter of course. A recent issue of the "Journal of the American Medical Association" reports the judgment of the Court in an appeal by a woman against a conviction for being in unlawful possession of narcotic drugs; and in the United States proof of possession by anyone not licensed to possess is *prima-facie* evidence of intent "unlawfully to sell, furnish or dispose of it." The facts of the case, as outlined in the report, were that the defendant had obtained her supply of such drugs (the plural is used) from a medical man: the issue was narrowed down by the Supreme Court—again we are dependent on a brief record—to the difference between dispensing and administering. The Court held that:—

A physician cannot lawfully "dispense"; a druggist cannot lawfully "administer." The legislature seems to have used the word "administer" in the sense that the drug shall be taken by the patient at once, under the immediate direction and supervision of the physician. It seems to have used the word "dispense" to mean that the drug shall be delivered to the patient by the person filling the prescription, to be taken away for future use.

One member of the Court, in a dissenting judgment, held that such a case was not clearly within the statutory prohibition, and that a physician might in good faith deem it necessary to leave "a dose or doses of some narcotic drug to be taken by the patient when the physician was necessarily absent, and, if so taken according to the physician's directions, the drug would be as truly administered by the physician as though given by his own hands." A similar case may conceivably arise in this country.

A BOTTLE OF HEROISM.—"All those of us who have, in our blind, unscientific way, admired courage, that act of the will by which men become like gods, are delighted to learn it is all a matter of adrenalin, a substance in the blood. Or so a lecturer at Cambridge assures us. . . . I look forward to the day when heroism will be sold at all chemists, in two sizes, 1s. 6d. and 3s. (insist on the label)."—"Beachcomber" in the "Daily Express."

New Books

Cosway, A. H.—*Buying and Selling a Business*. 7½ in. by 4½ in. Pp. 103. 3s. 6d. Pitman & Sons, Ltd., Parker Street, London, W.C.2. [A useful summary of the important features to be kept in mind when buying or selling a business. The citation of decided cases is carefully done, and numerous specimen forms are given.]

Stevens, H. B., and Lucas, C. E. L.—*First Lines in Dispensing*. 8 in. by 5 in. Pp. 190. 7s. 6d. J. & A. Churchill, 40 Gloucester Place, London, W.1. [The third edition. The difficulty of keeping such works entirely up to date is evidenced by the fact that dihydro-morphinone does not appear in the list of substances coming under the Dangerous Drugs Acts. There are ninety-five illustrations.]

Thoms, H.—*Betäubungsmittel und Rauschgifte*. 8½ in. by 6 in. Pp. 192. Marks 7.20. Verlag von Urban & Schwarzenberg, Berlin and Vienna. [This book embodies a series of fourteen lectures on narcotics and intoxicating poisons given by the well-known director of the pharmaceutical institute of students in the University of Berlin. The uses, as well as abuses, the action and effects of alcohol, various spices, tea, coffee, tobacco, opium, cocaine, morphine, many anaesthetics, sedatives, hypnotics and alkaloids are discussed in the lucid and captivating style which characterises Professor Thoms' writings. Instructive and highly informative without being pedantic, the author has succeeded in incorporating a wealth of highly interesting particulars—historical, scientific and commercial—regarding the many articles used as excitants, or to dull sensation, interspersed with much sound advice.]

Durrans, T. H.—*Solvents*. 8½ in. by 5½ in. Pp. xvi + 144. 10s. 6d. Chapman & Hall, 11 Henrietta Street, Covent Garden, London, W.C.2. [This work forms the fourth of a series of monographs in applied chemistry, edited by Dr. E. Howard Tripp. As organic solvents in recent years have increased in number and their use extended there is no doubt, in consequence, a need for a scientific exposition of their technical applications. The author has attempted to bring together available information in a concise form on solvents, but more particularly those used in the cellulose lacquer industry are dealt with here. The first part of the book, pp. 1-42, includes chapters on solvent action, plasticising solvents, viscosity, vapour pressure, inflammability, toxicity. Part II, pp. 45-140, deals with specific solvents, under the chapter heads of their various organic chemistry groupings. An index is provided and references to technical literature are given.]

Smith, J. W.—*The Effects of Moisture on Chemical and Physical Changes*. 8½ in. by 5½ in. Pp. xii + 235, with 44 illustrations in the text. 15s. Longmans, Green & Co., Ltd., 39 Paternoster Row, London, E.C.4. [The chemical and physical effects produced by minute traces of water form an interesting and puzzling group of phenomena, and it has been known for a long time that small quantities of water exercise a catalytic effect on the velocity of many chemical reactions. Dr. Smith has made a search of the literature connected with the effect of traces of water on physical and chemical reactions, and his book will be of value to investigators interested in physico-chemical science. This volume, one of the series of text-books of physical chemistry, edited by Mr. F. G. Donnan, F.R.S., is a summary of the influence of traces of water vapour on chemical reactions and the physical properties of pure substances. The scattered references to the subject have been collected and classified, and various observations have been correlated as far as possible. Full experimental procedure is given in the discussion of certain typical reactions which are retarded by desiccation, and in dealing with the influence of intensive drying on physical properties. In other cases an indication is given, wherever possible, of the mode of procedure employed in attaining the result described. An author index and a subject index complete the book.]

Mercury in New Zealand

By T. A. BLACK, B.Sc.

MERCURY has been known in New Zealand since the times of the earliest settlers in the Dominion. No interest, however, was taken in the matter, as the pioneers were too busily engaged in wresting a living from the soil. The writer has seen several pounds of mercury, gathered from a creek by a pioneer long since passed away, the almost undecipherable label bearing a date of over fifty years ago. Amongst the earliest discoveries was that of Ngawha Springs, the property recently acquired by Imperial Chemical Industries, Ltd., and on which over £100,000 has been spent by that company on the erection of a modern plant, which is just approaching completion.

The first public interest in the occurrences of mercury in New Zealand was the result of prospecting for silver at Puhipuhi, about twenty-five miles north of Whangarei. The cinnabar then discovered was in close proximity to the silver mines, and consisted of cinnabar pebbles, some of which contained up to 80 per cent. of mercury. A good deal of work was done, but no lode was found, and the enterprise was abandoned. It has been thought that the pebbles were formed in vesicular lava, but this view is incorrect. The writer has obtained cinnabar pebbles from this source, showing botryoidal and reniform structure, its genesis, therefore, being similar to those forms of hæmatite. Desultory prospecting for silver, at a later period, about twenty-five years ago, led to the discovery of the Great British mine by Longhurst. This was quite close to the previous discoveries, but was missed owing to the luxuriant forest growth, which has now disappeared due to timber milling operations. This is a typical mine, containing a well-defined lode, considerably above the average in ore content and value.

CINNABAR DEPOSITS NOT ADEQUATELY HANDLED

Contemporaneously with Longhurst's discovery, T. Mitchell discovered cinnabar on the property now known as the Mount Mitchell mercury mine. Since then feeble attempts have been made to exploit both these properties. The results to date from these attempts have been the production of seventeen tons of marketable mercury from the Great British and a few hundredweight from the Mount Mitchell mine. These comparatively small results, however, do not signify properties of poor productive capacities. They have never been adequately handled or financed; they have simply been toyed with by people having more important interests in other directions, the mining ventures being side issues; and history repeated itself in wretchedly poor treatment plants and similar finance being incapable of producing good results. As proof of this view, the Ngawha Springs property was originally equipped with two dome-shaped retorts and condensers, but the results were very poor. In consequence, for many years past the property had been considered a failure. No scientific investigation, however, had been made of its possibilities until Imperial Chemical Industries did so. The resulting enormous expenditure has given a rude awakening to those who had formed decided opinions as the result of past operations thereon. The same will hold true, at a later date, for the Great British mine, and some at least of the other known properties.

CINNABAR DISCOVERIES KEPT SECRET

There are a number of occurrences of cinnabar known to individuals in the mercury-bearing province, but most of those people now keep the knowledge to themselves, not feeling sure of fair treatment if they divulge their knowledge; and in one or two cases the knowledge has gone to the grave with its possessor. The mercury-bearing province is a large one, and traces of cinnabar can be got in many parts of it. There can be little doubt, therefore, that further discoveries will be made. The geological conditions are practically

identical with those of the Californian mercury mines. The genesis of the cinnabar is certainly associated in some manner with great extrusions of basalt; whilst the Great British and the Mount Mitchell mines are situated three miles apart on a major fault line, marked by large bodies of chalcidonic quartz. The Great British mine was the first at which any real mining operations were attempted. The outcrop was very rich and tributaries made a living by treating outcrop ore in camp ovens. At a later period a Novak (Hustnan) type of furnace and condensers were erected. This furnace was capable of treating ten tons per day and from it was produced the seventeen tons of mercury previously mentioned. The results, however, were very unsatisfactory. The furnace is really an iron-sheathed lime kiln in type. It was incapable of treating fine ore, the richest ore in the mine, and even with coarse ore the losses were very heavy. This was owing to the violent fluctuations in furnace temperature, due to intermittent feeding of wet ore. The distillation temperature was lost every time a charge was admitted, and when it was regained a further charge ruined it. Owing to this unavoidable trouble with this type of furnace it is probable that at least one-third, and possibly more, of the mercury was lost. The writer has seen spent ore, issuing from the discharge doors, with globules of mercury adhering, and this when the most careful attention was given to the furnacing. The owners were unable to put in a drying plant and do other necessary work to give it any chance of commercial success. There were also further troubles with silicate of iron forming and choking the furnace. With all these troubles the production operations showed a return of over one per cent. of mercury, which mercury operators will recognise as a highly satisfactory one. As to the mine itself there is no question as to its grade. Assays as high as ten per cent. mercury are not uncommon, and occasionally higher. Possibly a conservative average may be taken as between one and two per cent. The mine contains a well-defined lode, varying from three feet to eight feet in thickness. The lode is, in most parts, broken into large blocks; these blocks are coated with cinnabar, and the interstices between the blocks filled with sand, clay and cinnabar—at times the filling is almost pure cinnabar. A few bores put down showed extension of the ore body, and the Government report thereon shows "the probability of 35,000 tons of ore." It is to be noted that more bores would probably have increased this estimate. None of this probable ore has yet been mined. The representative of Imperial Chemical Industries spent several weeks examining the property; but the owners were unable to accept the terms proposed.

The Mount Mitchell mine is a huge blanket of chalcidonic quartz covering fifty acres. A certain area of this surface deposit carries cinnabar. The thickness of this "blanket" is unknown, but it is known to be more than thirty feet. The grade of ore is low, but in places there are seams of solidified siliceous mud carrying higher values. A remarkable feature is the enormous amount of very low grade ore, in which the deposition of silica and cinnabar was contemporaneous, the whole mass of silica having a bright scarlet colour which the most powerful microscope fails to resolve into anything but a colour. Occasional patches of heavy cinnabar plastered on the quartz blocks have been found. The real value of this property is unknown. The writer is of opinion it never will be known till the quartz sheet is pierced or a level driven beneath it, so that the conduits of the old springs and the fissures in the underlying greywacké can be examined. It is clear that numerous extinct springs carried cinnabar in solution; possibly fissures below might be found carrying high grade ore. This actually does occur beyond the limits of the quartz sheet, but the fissures so found are too small for commercial operations. But under the main cinnabar-bearing

quartz it is entirely reasonable to think the fissures would be larger and more numerous. The outstanding feature of the mine is the amount of low grade ore on the surface. Mass production methods might handle this at a profit.

The Rising Sun mercury mine is in the same district. It is of the same character as the Great British, but it is not of the same high grade. The lode is not as well defined, being more like a seam in the country. A small production has also been made from this property.

I.C.I. DEVELOPMENTS

The Ngawha Springs deposit which has lately come into prominence as a result of the large expenditure thereon by Imperial Chemical Industries, Ltd., is in quite a different class to the preceding ones. Whether a true lode has been discovered recently is kept secret. Here hydrothermal springs are active, so that it bears a striking resemblance to the Steamboat Springs mercury deposit of California. Along the course of the hot springs is bituminous mud containing both cinnabar and free mercury. Free mercury is characteristic of the property. Globules of mercury larger than a pin's head are at times found, plentifully distributed in the roots of plants. Alternating layers of mud and clays, in the neighbourhood of the present active springs, are said to contain values; and the value of the property lies in this distribution beyond the confines of present activity.

Some years ago a mining engineer was sent from England to examine this property. His opinion was unfavourable, thereby confirming the general impression that it was a "white elephant." He spent only a few days on it, and formed his judgment on surface appearances. The present work, as the result of an examination extending over months and embracing hun-

dreds of shallow bores, shows the futility of forming an opinion without proper detailed investigation. This last is the only scientific examination the property has ever received. All the principal mercury deposits, except the Rising Sun, possess great economic advantages in regard to position. The Ngawha Springs (Kaikohe Development Co.) is within three miles of a railway station by good, flat motor road. Mount Mitchell is four and a-half miles from rail by a good motor road and the Great British eight miles by motor road. In each case a motor car can go right alongside the mine works. This is a great advantage compared with the positions of so many mines situated in rough, inaccessible country.

Although mercury is not classed as a precious metal, its ore, cinnabar, is remarkable for its comparative scarceness. Widespread as the British Empire is, New Zealand is the only part of the Empire, as far as the writer can learn, containing commercial cinnabar. Queensland and Canada have produced small quantities, but their deposits seem small and erratic. Fulminate of mercury appears still to be an essential for detonators, to say nothing of other uses, so that the importance of an Empire supply of mercury is evident. With the present collapse in the prices of all non-ferrous metals, except mercury, it is remarkable that English companies, which for many years have been hunting the world over for gold, silver, lead, copper and tin mines, do not take up this industry. There is no doubt that mercury is in the strongest position of all commercial metals to-day.

Previous articles on the production of mercury in New Zealand have appeared in THE CHEMIST AND DRUGGIST of January 11, 1930 (p. 50); May 24, 1930 (p. 648); and June 7, 1930 (p. 708).

Chlorine: A Phase in its History

By LEONARD DOBBIN, Ph.D.

I—Oxymuriatic Acid

It is well known that the second half of the eighteenth century was marked by a signal increase of activity in the investigation of chemical phenomena, and that this activity was manifested in a special degree in connection with the discovery and examination of gases. At the hands of Black, Cavendish, Priestley, Scheele, Lavoisier and others, remarkable advances were made in the discovery of hitherto unknown gases and in the collection of additional facts concerning gases already more or less imperfectly known. So numerous and important were the new developments in this department of investigation that the period which began soon after 1750 has been designated the period of Pneumatic Chemistry.

While the observation of new facts relating to the properties of the various gases proceeded rapidly, theoretical conceptions with regard to them and accurate opinions as to their elementary or composite nature did not keep pace with these observations. Hence much diversity of opinion existed regarding individual gases, and fluctuations of views took place from time to time with respect to several of them. Hydrogen, oxygen, nitrogen, chlorine, carbon monoxide, methane, nitric oxide—to cite some of the more notable examples—all presented difficulties to the investigators of the period, and in the cases of certain of these gases, doubts regarding them prevailed well into the second decade of the nineteenth century. In this historical sketch it is intended to direct attention to the misconception entertained for years with respect to the nature of one of the gases just mentioned, namely, chlorine, and, in particular, to describe certain of the more prominent features of one of the most striking scientific duels in the whole history of the pneumatic period.

A vigorous and occasionally somewhat heated disputation took place concerning chlorine for several years, from about 1811 onwards; and although stress is seldom laid upon it now, it attracted much attention at the

time, and it is still of considerable interest and importance to the student of the history of chemistry. It is sometimes referred to as the 'chlorine controversy.' It will be of assistance in dealing with this controversy to relate certain of the earliest observations made upon chlorine, quoting these mainly as they are described by Kopp in his "Geschichte der Chemie," and to refer briefly to several other general matters of theoretical chemical import which have special bearing upon the controversy.

THE PHLOGISTON THEORY

The liberation of chlorine in quantity and in a condition of comparative purity was an incident in the course of an examination by Scheele, about the year 1771, of the mineral pyrolusite (consisting mainly of manganese dioxide), or as it was then called "brunsten (Swedish), braunstein (German)—literally, "brown stone." This mineral was also referred to as *magnesia nigra*, a name applied to it in contrast with *magnesia alba*, a substance of totally different composition and properties. In Britain it was simply called manganese. Scheele observed that the new gas was liberated slowly in the cold, but rapidly and abundantly on heating, when the finely-ground mineral was mixed with twice its weight of pure spirit of salt, or "marine acid." In his paper on manganese, published in 1774, in which the properties of the gas are described with considerable detail, Scheele, in view of the mode of its preparation and of his idea as to its chemical nature, and in conformity with the nomenclature of the period, called it "dephlogisticated marine acid"—i.e., marine (or muriatic) acid deprived of its phlogiston.

This early descriptive name for chlorine may require some elucidation for the information of any readers who are not already acquainted with the main features of the phlogiston theory—a theory concerning the nature of inflammable substances and combustion which dominated the minds of most chemical philosophers for more than

a hundred years in the seventeenth and eighteenth centuries. According to this theory, substances which were combustible owed that property to their containing phlogiston, or the principle of inflammability. When they burned, they parted with this principle, and the agitation of the air and the other phenomena which accompanied their combustion were occasioned by the escape of the principle. The ash of wood or of coal, which remained after the combustion was completed, was the non-combustible matter with which the phlogiston had been associated in the original substance. Combustibles which yielded little ash when they burned were regarded as being rich in phlogiston, whereas those which left behind ash in large proportion contained little of the principle. Various endeavours were made to obtain a more intimate knowledge of phlogiston, and it was supposed by some that it might be possible to obtain it as a separate substance. Many, on the other hand, held that it could not be so obtained, but could only exist in association with something else, and could not be separated from one substance unless some other substance was present with which it could enter into union. The phenomenon of the burning of any combustible substance in the air and the fact that such a combustion could only proceed for a limited period in a confined quantity of air, were alike explicable by the phlogiston theory; inasmuch as the air was considered to be capable of taking up the phlogiston with which the burning material had to part in order that combustion might proceed, but, as the capacity of the air for phlogiston was limited and as, in consequence, a confined quantity of air sooner or later became saturated with the principle, the combustion necessarily came to an end.

THE ANTIPHLOGISTIC SYSTEM

When hydrogen was obtained in a state of comparative purity by Cavendish in 1766, it was supposed by him to be phlogiston itself—a view which was accepted by various contemporaries, although it does not appear to have been exactly that held by Scheele when he adopted the name "dephlogisticated marine acid." For Scheele, dephlogisticated marine acid was simply marine or muriatic (hydrochloric) acid deprived of its phlogiston, or of that portion of the inflammable principle with which it had been associated in the marine acid prior to its interaction with magnesia nigra. Following pretty closely upon the discovery of oxygen, independently, by Scheele and by Priestley, about 1772, and upon the first announcement of its more striking properties by Priestley in 1774, Lavoisier was able to formulate and publish his new or antiphlogistic system in opposition to the established phlogistic system. Stated in the broadest terms, in so far as it was concerned with the phenomena of ordinary combustion, the new system represented the burning of inflammable substances as consisting in the union of the constituents of these with the oxygen of the atmosphere, and the supposed loss of phlogiston of the old system now became the gain of oxygen in the new. The products of the combustion of sulphur and phosphorus gave rise, in contact with water, to sour or acid substances; and the acidic character of the gas which came to be called carbonic acid gas was noted. As a result of the observations made upon these substances and upon the acids derived from nitrogen, all of which were recognised as containing oxygen, this latter element was regarded by Lavoisier as essential for the production of acids—as pre-eminently the acid producer—and it received from him, in consequence of its supposed character in this respect, the name which it still bears. Under the new system the so-called calces—the substances which are now known as metallic oxides—were recognised as compounds of the metals with oxygen. The opinion regarding oxygen as an essential constituent of all acids was quite generally adopted, and it prevailed, unchallenged, for more than thirty years. It is of importance to note that the substances which were called acids by the earlier chemists are now known as acid anhydrides, while the substances now simply called acids were designated as hydrated acids.

In the earlier part of the nineteenth century Berzelius developed his "dualistic theory" of the composition of salts. In accordance with this theory all salts consisted of a basic oxide in union with an acidic oxide.

THE DUALISTIC THEORY

This theory of Berzelius was very generally adopted, and formulas based upon it, such as CaO, CO_2 for calcium carbonate, and $\text{Fe}_2\text{O}_3, \text{SO}_3$ for ferric sulphate, were still in common use by some chemists until less than fifty years ago. They have now fallen almost entirely into disuse, and have given place to the more familiar formulæ at present employed. In the course of his prolonged and laborious investigations into the quantitative composition of great numbers of salts, Berzelius laid much stress upon the simple relationships subsisting between the proportions of oxygen in the basic and acidic constituents, respectively, of the various groups of these salts. These relationships he recognised as furnishing excellent illustrations of Dalton's doctrine of combination according to definite atomic proportions. It was shortly after the discovery of chlorine by Scheele that Lavoisier endeavoured to show that all acids contained oxygen. He was unable to obtain any proof of this in the case of muriatic acid, but led—or, rather, misled—by analogy (which Davy once said "was the fruitful parent of error"), he held that this acid consisted of oxygen associated with an unknown muriatic radical, and his view was generally accepted.

In 1785-86, chlorine was further examined by the elder Berthollet, who made the important observations that when water, saturated with the gas, was exposed to direct sunlight, minute bubbles of oxygen were rapidly given off, the yellowish colour of the solution gradually disappeared, and eventually a dilute solution of muriatic acid remained. From these observations he concluded that the gas was decomposed by sunlight into its constituents, namely, oxygen and muriatic acid, and that these had only been held together by a very feeble affinity. Accordingly he renamed Scheele's "dephlogisticated marine acid," calling it "oxygenated muriatic acid," a name which Kirwan contracted to oxymuriatic acid. These investigations still left unknown the nature of the radical supposed to be present in muriatic acid, and various conjectures were made regarding it, but most of these were of rather a fantastic description and failed to find many adherents. It was definitely assumed, however, that oxymuriatic acid contained more oxygen than muriatic acid.

(To be continued.)

Recent Patents

Abstracts of specifications of recently-granted patents for inventions. The complete specification (1s. each including postage) of any British patent can be obtained from the Patent Office, 25 Southampton Buildings, London, W.C.2, on quoting the name of the patentee and the number of the patent.

Manufacture of Acetone.—Manufacture of acetone by catalytic conversion of acetic acid vapour, wherein the acetic acid vapour is passed over the heated catalyst at such a speed that a substantial portion of the acetic acid vapour leaves the catalyst chamber unchanged and serves as a carrier. (Consortium für Elektrochemische Industrie, Munich. 299,720.)

Production of Calcium Formate.—Process for the production of solid calcium formate by the reaction of calcium oxide and carbon monoxide under pressure and at a raised temperature in which the reaction products are allowed to act on each other while being mixed with a calcium formate solution. (Lonza Elektrizitätswerke, Gampel and Basle. 322,909.)

Safety Razor Blade Holder.—A holder for all classes of safety razor blades for sharpening purposes, of celluloid, metal or other material and of U or rectangular shape supported on a handle and carrying at its upper end a cross-split spring bar holder to take the blade, a lower spring bar being arranged to move in slots at either side of the holder to receive and position the blade while stropping. (A. J. Eynor, St. Annes-on-Sea. 326,980.)

Insurance Act Dispensing

Record of Matters concerning Chemists' Interests in the National Health Insurance Acts

Local Reports

ENGLAND AND WALES

Blackburn.—To Blackburn Insurance Committee, on September 10, the clerk reported that five test prescriptions had been taken; three were accurately dispensed. In two cases, where two ounces of ointment were prescribed, the analysis showed a deficiency in ointment supplied. It was stated that the practice in Blackburn was when two ounces of ointment were ordered the prescription was regarded as having been accurately dispensed if the compound completely filled a two-ounce chip box. Some ointments had so much air mixed with them in compounding that it was impossible to put two ounces in a two-ounce chip box. In other cases two ounces of ointment would not fill a two-ounce chip box, so that on average, taking one ointment with another, when the chip box was completely filled there was no loss to the Committee. A motion to refer the matter to the Pharmaceutical Committee was agreed to.

Derby.—The result of an investigation of an alleged breach of the terms of service for supplying drugs and appliances was reported at a recent meeting of the Derby Insurance Committee. Under the testing scheme a prescription was presented and was made up by the chemist's wife, her husband being absent at the time. The wife admitted that she was not a qualified dispenser. The chemist explained to the Pharmaceutical Service Subcommittee that on the occasion of the test he was away for a short time consulting a doctor. He returned a few minutes after the prescription had been dispensed. The Subcommittee, finding that there had been a breach of the terms of service, recommended that the chemist's remuneration be reduced by two guineas, that he be informed that the Committee viewed the offence as a serious one, and that he be cautioned to adhere in future strictly to the terms of service. This recommendation was adopted. Pricing bureau statistics showed that the number of prescriptions issued in the Committee's area during the quarter ended March 31 was 58,807.

Kent.—At a meeting of the county Insurance Committee recently, it was reported that two cases of inaccurate dispensing had been brought before the Pharmaceutical Service Subcommittee. In one case the chemist was cautioned, and in the other censured, for inaccuracy in the dispensing of powders.

London.—A meeting of the London Pharmaceutical Committee took place on September 16. The report of the Central Checking Bureau for the month of April showed that the margin of error in pricing was 0.03 per cent. The Committee also noted that the following appliances had been disallowed:—Leather wrist strap, eye pads, capsicum wool and throat brushes. The Committee would again point out to chemists that payment can only be made for those appliances which are specified in Part III (b) of the Drug Tariff. The Chemists' Service Subcommittee reported particulars of a meeting at which seven cases were considered under the testing scheme. Five chemists were cautioned and the remaining two chemists were censured. In the secretary's report attention was called to the fact that linctus diamorph. hyd. N.F. and lin. methyl sal. simp. N.F. are now included in the drug tariff under their respective titles; that the circular recently issued by the Insurance Committee cancelled all previous lists of preparations disallowed and contained a fresh list of preparations which would not be allowed from September 1; that during the recess it was necessary to issue a circular to London panel chemists furnishing information regarding the removal of the Board of Customs concession relating to No. 1 surgical spirit, also two preparations in the National Formulary containing

industrial spirit; the following comparative statistics relating to the period January to June 1929 and 1930:—

	1929	1930
Total number of prescriptions	5,055,692	4,239,502
Cost of ingredients	£73,279 18s. 2d.	£58,396 16s. 5d.
Cost of dispensing fees	£94,983 19s. 0d.	£76,943 9s. 2d.
Average cost of ingredients	3.48d.	3.31d.
Average cost of dispensing fees	4.51d.	4.35d.
Number of persons on list	1,833,257	1,887,804
Average number of prescriptions per person	2.76	2.25

Shropshire.—At a meeting of the Shropshire Insurance Committee, on September 6, it was reported that a recommendation made by the Pharmaceutical Service Subcommittee, and supported by the Insurance Committee, that a fine of £5 should be imposed on a chemist for an alleged deficiency of 19 per cent. of the correct quantities of ingredients in medicines dispensed for an insured person, had been forwarded to the Ministry of Health for approval. The Ministry, it was stated, had replied that, having regard both to the nature of the substance dispensed and to the percentage of error disclosed on analysis, they had decided not to withhold any money that might be due from the committee to the chemist concerned. Several members of the committee expressed the view that it was useless wasting their time investigating such cases if the Ministry treated them as "practically trivial matters." A resolution was passed strongly protesting against the attitude taken up by the Ministry.

West Ham.—It was reported to the Insurance Committee recently, that the number of prescriptions issued during the first quarter of the year was 160,293, a decrease of 31,806 on the figures for the corresponding period of last year; the cost of ingredients was £2,260, a decrease of £315; and the dispensing fees totalled £2,924, a decrease of £697.

Wiltshire.—At a meeting of the Wiltshire Insurance Committee on August 6 an item in the report of the Pharmaceutical Service Subcommittee censuring two chemists for inaccuracies was discussed. In each case an unqualified assistant was responsible. It was pointed out that in neither case did the chemist concerned derive any financial benefit from the error. The chairman said he thought the fact that the chemists would receive a resolution of censure was sufficient.

Complaint Against Medical Man

A representation made to the Minister of Health by the Middlesex Insurance Committee, that the continuance upon their medical list of Dr. Spain would be prejudicial to the efficiency of the medical service of the insured, was investigated recently. The representation was based on the following grounds: (1) That the respondent failed to give proper and adequate medical attention and treatment to an insured person (since deceased); (2) that the respondent failed to visit and treat the said insured person whose condition required such a visit or visits and treatment, particularly on May 16, 1929; (3) that the respondent was under the influence of drink on the evening of May 15. The Insurance Committee received a letter from the Ministry which stated that the Minister had not found it necessary to take the extreme course of removing Dr. Spain's name from the list, but that he had decided to withhold £50 from the money payable to the Insurance Committee in respect of medical benefit. This sum should be deducted from the remuneration payable to Dr. Spain. The Minister had decided that Dr. Spain shall pay the taxed costs of the Insurance Committee.

Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling, packing, etc. Qualities of chemicals, drugs, essential and fixed oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

28 Essex Street, W.C.2, September 25

DISTURBING influences in regard to the German political crisis and continued unsettled trade conditions in the United States have temporarily affected financial and Stock Exchange circles, and tended to aggravate the lack of confidence in the commodity markets, whereby legitimate business in many directions is restricted. So far there has been but little in the nature of a seasonal growth of demand as customarily experienced in the autumn, and prospects are still very dubious. New low records were touched in certain produce, including sugar and rubber. The plight of the Cuban and Java sugar producers has become accentuated, while the market is faced with the advent of a bumper European beet crop. Home stocks of rubber are mounting up merrily, and thus weighing on the market. Shellac is cheaper and kept down at a low level despite much reduced shipments. Crude drugs have been quiet pending the auction held to-day. Cod-liver oil remains firm, Norway reporting an improved demand of late. Chinese galls are easier for shipment and carnauba wax is steady. Menthol is quiet and unchanged. Ergot has gradually hardened; gamboge is in better supply and cheaper. Alexandrian senna pods have been sold at lower prices privately. Owing to the recent fire which destroyed or damaged a considerable quantity of various spices, including African ginger, nutmegs, pimento, cardamoms, etc., a better tone has been given to the market generally. Pepper and cloves are dearer. Among pharmaceutical chemicals, keen competition and lack of demand has led to one or two small price changes. Foreign tartaric acid has become unsteady owing to the break up of the Italo-German agreement, and the report that the German interests have dissolved; sodium bromide is weak and competition in hexamine is very keen. Among the industrial chemicals, the general tone is easy in view of the poor demand. Arsenic is held for full prices. Potassium and sodium salts are all slow of sale. Lead acetate is irregular, and all zinc products are lower, following the renewed decline in metal. Among the so-called vegetable oils, a further number of reductions are reported, including acid oils, cotton, palm kernel, palm, rape, soya, wood and linseed; turpentine has fluctuated, but is about level on balance. In the mineral oil section, petrol is lower, and corresponding reductions are anticipated in benzols, solvent naphthas and paraffin oils; lubricating oils tend easier.

Higher	Firmer	Easier	Lower
Cloves (Zan.) Gum acacia (c.i.f.) Pepper	Antimony (Ch.) Coconut (des.) Ergot Ginger (W. Afr.) Platinum Wax (Carnauba) Steadier Lactic acid Thymol	Caffeine Citric acid Cotton oils Cream of tartar Galls (Ch.) Lemon oil Myrrh Palm kernel oil Palm oils Rape oil Soya oil Tartaric acid	Acid oils Calumba Gamboge Linseed oil Pe'ro Pimento Rubber Senna pods (Alex.) Shellac Valerian Wood oil Zinc products

Crude Drugs, etc.

ANTIMONY.—Chinese is somewhat firmer, due to an improved demand, and there are hardly any sellers below £27 for spot parcels. Terms for shipment are around £26 10s., but with only few offers. Chinese crude on the spot is nominally £22 to £22 10s. English high-grade is £46 to £46 10s., and other brands vary down to about £33. Chinese white oxide on the spot is worth about £33 per ton.

ARARоба.—The "Sea Victory" has brought 15 cases *via* Antwerp.

BISMUTH.—The "American Banker" has brought 37 boxes metal from New York to London.

CADMIUM.—With excessive supplies offering the market is very irregular. Cheap parcels are offered at 2s. 7d. per lb., but the larger interests associated with producers in Canada and Australia ask 2s. 11d. per lb. Another good-sized quantity has come along from Canada, and the demand from consumers continues from hand to mouth.

CAMPHOR (REFINED).—Japanese slabs are quiet at 2s. 3½d. per lb. on the spot, and for October-November shipment 2s. 0½d. c.i.f. is quoted; ¼oz. tablets offer at 2s. 10d. per lb. on the spot, and October-November shipment at 2s. 6½d. c.i.f.

CASCARA SAGRADA.—The "Kambove" has brought 820 sacks from the Pacific Coast.

CHAMOMILES.—Belgian new crop remain firm with a fair amount of inquiry, good white first pickings offering at 130s. per cwt., with prices to arrive on about the same parity.

CINCHONA.—Arrivals to London comprise 1,700 bales from Java, per s.s. "Antilochus."

CLOVES are dearer, Zanzibar offering at 1s. 2d. per lb. spot, with sales afloat at 1s. 1d. Sales for shipment include September-November at 1s. 0½d. c.i.f. Madagascar on the spot have been sold at 1s. 1½d. per lb.

The exports from Zanzibar during the period January to June 1930 amounted to 89,578 cwt., against 30,580 cwt. for the corresponding period of 1929.

The landings in London of Zanzibar during the week ended September 20 were 50 and the deliveries 13, leaving a stock of 534, against 1,016 in 1929 and 4,349 bales in 1928. The landings in London from January 1 to September 20 have been 6,182 in 1929 and the deliveries 5,645, against 6,530 in 1929. Landings of Madagascar in London during the week ended September 20 were 7½ and the deliveries 109, leaving a stock of 1,463, against 76 in 1929. From January 1 to September 20 landings of Madagascar have been 4,924, against 848 in 1929, and the deliveries 3,474, against 3,317 in 1929.

COCOA BUTTER.—Prime English is quoted at from 11½d. to 1s. per lb., C.F.R. at 1s. 0¾d., and Van Houten's "A" at 1s 0½d., in not less than one-ton lots.

COCONUT (DESICCATED).—Fine, medium and coarse on the spot is quoted at 23s. 3d., at which business has been done. For shipment (minimum 100 cases), 22s. 3d. c.i.f. is quoted, with sales thereat; market is firmer.

COD-LIVER OIL.—From Bergen, under date of September 17, we are advised that the market is still very firm with an advancing tendency. Demand from abroad has improved of late and stocks are mostly in the hands of exporters. The exports from Norway up to September 7 amount to 54,572 barrels, against 74,029 barrels last year.

CORN PRODUCTS, ETC.—Guaranteed water-white English *glucose* (corn syrup) is unchanged at 19s. per cwt. for September-October delivery ex store, London; American guaranteed water-white is also 19s. net for delivery up to end of October, ex store, London. Dutch *maize starch powder* (cornflour) is 12s. per cwt. on the spot; American for September-October delivery is 12s. 3d. ex store, London. *Pearl starch* for September-October delivery is 11s. 9d. per cwt. ex store, London. Dutch *maize starch crystals* is 19s. 6d. on the spot, and American for September-October is 16s. per cwt. ex store, London. Dutch *dextrin* is quoted at 18s. to 22s. per cwt. on the spot, as to quality. American oarary for September-October delivery is 18s. 4½d.; white is 18s. 1½d. per cwt. net ex store, London, for September-October delivery. Dutch *farina* is 10s. 6d. per cwt. on the spot, and to arrive 9s. 4½d. is quoted f.o.b. for September-October shipment. Polish is 9s. 9d. per cwt. spot; October-December shipment 9s. 6d. landed terms.

ERGOT has shown a gradually hardening tendency, and for prompt shipment of Russian or Polish from Hamburg 11½d. c.i.f. is now wanted. Offers of Spanish or Portuguese from the source are limited, and, for small lots only, business has been done at 2s. 3d., with up to as much as 2s. 6d. asked.

GALLS.—Chinese are easier, plum-shaped being quoted at 65s. per cwt. c.i.f. ordinary shape for October-November shipment have been sold at 60s. c.i.f., and sellers of November-January quote 59s. 6d. c.i.f. Persian blue is 70s., green 65s., and white 60s. on the spot.

GINGER.—West African has a firmer undertone, with spot sellers at 40s. per cwt., and no c.i.f. offers at the moment. A considerable quantity is reported to be destroyed or damaged in the recent fire.

In the Sierra Leone Colonial report for 1929 it is stated that after some lean years the market in ginger showed some improvement, with the result that the shipments during the year showed an increase of 50 per cent. over those of the previous year. The exports in 1929 were 30,966 cwt. (£39,308), against 20,431 cwt. (£30,582) in 1928.

GAMBOGE is now in much better supply and prices are cheaper, good Siam pipe being obtainable at from £20 to £21 per cwt.

GUM ACACIA.—Owing to the small daily arrivals and cessation of old crop at the source and manipulation, the Khar-toum market is advancing, shippers quoting natural Kordofan for September-October shipment at 54s. c.i.f. and cleaned at 56s. per cwt. c.i.f. New crop natural for December-January shipment is still sensitive and quoted at 50s., and cleaned at 52s. 6d. per cwt. c.i.f. U.K. and/or Continent. The spot price of Kordofan cleaned is 60s. to 62s. 6d. per cwt., and natural sorts 58s. Talha is 36s. on the spot and about 27s. c.i.f. to arrive.

MENTHOL is quiet, with spot sellers of Kobayashi-Suzuki at 14s. 6d. per lb., and for October-November shipment 14s. c.i.f. is quoted. Arrivals comprise 80 cases *via* Marseilles.

MERCURY is unchanged, except that perhaps a few lots of "outside" metal are being occasionally reported for sale, and business is apparently being done at a trifle below the terms quoted for controlled metal. Even some small lots of American are said to have been marketed on this side. The demand has been chiefly retail, but inquiries have been more numerous and spot prices remain at £21 18s. 9d. to £22 per bottle net, and the f.o.b. price for shipment is still £21 15s. net, but there is practically no business arranged at the moment on that basis.

OPIUM.—A message from Belgrade states that the Yugoslav opium harvest is now over, the yield amounting in round figures to about 150,000 kilos (about 150 tons). In Turkey the yield is about 480,000 kilos (480 tons), making a total production for Europe of 630 tons, a postwar record. The requirements of Europe are estimated at 400 tons; this means that there is a surplus, which has led to a fall in price. Among purely European countries, Yugoslavia is the only one that cultivates the opium poppy on a large scale, and its importance in the world production is great, not only on account of the quantity, but the quality of the opium. From about the same number of hectares (12,400 to 12,900), 205 tons of opium were produced in 1927-28, compared with only 38 in 1928-29 and 150 in 1929-30.

PEPPER is dearer, Lampong is 6½d. per lb. on the spot. To arrive, the sales include August-October shipment at 5½d. to 5¾d., and October-December at 5½d. to 5¾d. c.i.f. Tellicherry for October-November shipment is 84s. c.i.f., and Alleppy is 84s. c.i.f. for October-November shipment. White Muntok is dearer at 9½d. spot. Sales to arrive comprise August-October shipment at 7½d. to 8½d., September-November at 8½d. to 8¾d., and October-December at 7½d. to 8½d. c.i.f.

PIMENTO is easier at 7½d. per lb. spot; September shipment is 58s., and October shipment 57s. c.i.f.

PLATINUM.—Following the recent heavy fall, rather more demand has been attracted and prices are better, indicating a recovery of 10s. and ranging from £6 10s. to £7 per oz. So far as can be gathered, there is a prospect of the negotiations which have been going on lately to protect the market being successful. The sales effected by South African producers in July were only 693 oz., against 1,624 oz. in the same month last year.

RUBBER is again easier, prices having fallen a further ½d. per lb. on the week. The market is quite steady at the decline, and a fair amount of spot business has been transacted. During the past few days several producing companies have announced their intention of stopping production for the time being, and the general feeling which prevails at the moment is that a number of the larger producers will follow suit, as it seems impossible to lower their production costs to meet the present prices. Arrivals last week totalled 2,651 tons, whilst deliveries were 2,236 tons, showing a further increase of 415 tons in the stocks. The London stock now stands at 82,648 tons, against 40,151 tons at the corresponding period last year. The Liverpool stock now stands at 34,085 tons. Quotations (Wednesday, 5 p.m.): No. 1 standard ribbed smoked sheet, spot and September, 3½d.; October-December, 4d.; January-March, 4½d.; April-June, 4½d. per lb.

SEEDS.—**ANISE**.—Spanish is 52s. 6d. and Russian 31s. per cwt. on the spot. **FENNEL**.—Bulgarian on spot is quoted at 40s. per cwt. **CANARY**.—Mazagan on spot is 26s., and for shipment 24s. 9d. c.i.f. is quoted. Morocco remains at 25s. spot. For shipment, 20s. 6d. c.i.f. is offered. Turkish (2 per cent.) for shipment is dearer, sellers now asking 17s. 9d. c.i.f. London. **MILLET**.—Morocco on spot is unchanged at 8s. 3d. **CUMIN**.—Malta on spot is 65s. and Morocco is now in demand at 52s. 6d. on the spot. **FENUGREEK**.—Old crop on spot is offered at 19s. For shipment, new crop of very poor quality is quoted at 14s. 9d. c.i.f. **CORIANDER**.—Business has been done this week at 9s. 3d. for 500-bag lots, ex store. Sellers now asking 9s. 6d. to

9s. 9d. **CARAWAY**.—Dutch on the spot is quiet at 32s. 6d. per cwt. **MUSTARD**.—English is offered at from 25s. to 32s. per cwt., according to quality.

SENEGA remains firm, with a limited quantity in second hands offering at from 3s. to 3s. 1d. per lb. on the spot, and for shipment 3s. 3d. c.i.f. is quoted by re-sellers.

SENNA.—Alexandrian pods have been sold privately at cheaper prices, including good bold pale at 2s. 3d. per lb. A fair quantity has arrived.

SHELLAC is quiet and lower at 90s. per cwt. spot for usual standard TN orange; fine orange is 115s. to 200s.; pure button is 120s., and AC cakey 102s. 6d. To arrive, sales include September-October at 82s. 6d. to 79s., October-November at 80s. to 79s., and November-December at 80s. to 79s. c.i.f., closing sellers at 78s. c.i.f. For delivery, the sales comprise TN for October at 84s. to 79s., December at 86s. to 81s. to 82s., March at 88s. to 84s.

VALERIAN is cheaper, new crop Belgian offering for November shipment at 35s. per cwt. c.i.f., and on the spot 40s. will buy.

WAX (BEES).—At the recent lower level of prices buyers have been attracted to this market, the private sales including Abyssinian at £4 12s. 6d. and Benguela at £4 7s. 6d. per cwt. c.i.f., but higher prices are now asked. On the spot, Abyssinian is quoted at £5 7s. 6d., Benguela and/or Mozambique at £5 7s. 6d. to £5 10s., Morocco at £5 5s., and good white Calcutta at £8 15s. per cwt.

WAX (VEGETABLE).—Japanese is quiet at 66s. per cwt. on the spot, in not less than five-case lots, and for October-November shipment 57s. 6d. c.i.f. is quoted. Carnauba is steady, fatty grey offering at 83s. per cwt. on the spot and at 77s. 3d. c.i.f. for September-October shipment; chalky is 80s. on the spot and 75s. c.i.f. for September-October shipment. Primavera is 125s. spot and 110s. c.i.f. for September-October shipment. Mediana is 115s. spot and 103s. c.i.f. for September-October shipment.

Essential Oils

A QUIET week is reported and most prices are unchanged. Sicilian lemon is easier. American peppermint is rather firmer; spearmint and wormseed are easier.

ANISE (STAR) is steady at 4s. 9d. per lb. in leads and 4s. 7d. in tins. To arrive, leads are quoted at 4s. 3d. per lb. c.i.f., and cases of tins at 4s. c.i.f.

BERGAMOT is unchanged at 10s. 6d. to 10s. 3d. per lb. spot and 10s. 3d. per lb. c.i.f.

CASSIA, 80 to 85 per cent. c.a., is quiet on the spot at 3s. 7d. per lb., and 3s. 2d. per lb. c.i.f. to arrive.

CINNAMON LEAF on the spot is at about 4s. 9d., and to arrive 3s. 9d. per lb. c.i.f.

CITRONELLA.—Java is slightly easier at 2s. 3d. per lb. spot and 2s. 2d. per lb. c.i.f. Ceylon on the spot is unchanged at 2s. 1d., and for shipment 1s. 9d. c.i.f.

EUCALYPTUS is easier to arrive, but unchanged on the spot; 70 to 75 per cent. cineol is offered at 1s. 6d., and 75 to 80 per cent. at 1s. 7d. To arrive, drums could probably be had on a firm order at 1s. 4d. c.i.f.

GERANIUM.—Bourbon is unchanged at 16s. 6d. to 16s. 9d. per lb. spot and 16s. 3d. c.i.f. Algeria is about 16s. spot.

GINGERGRASS on the spot is 7s. 6d. per lb., and to arrive at 6s. 9d. per lb. c.i.f.

LAVENDER is at from 9s. 6d. to 10s. per lb. spot, according to ester content.

LEMON.—Hand-pressed on the spot is at from 3s. 9d. to 4s. per lb., and to arrive at from 3s. 6d. to 3s. 9d. per lb. c.i.f.; machine-made less 6d. per lb.

LIME.—West Indian distilled is very firm at 32s. per lb. spot, and very scarce for shipment, with few c.i.f. offers.

ORANGE.—Sicilian on the spot at from 8s. 9d. to 9s. 3d., according to quantity and seller, and to arrive at 8s. 6d. to 9s. c.i.f. West Indian spot is 8s. 6d. per lb.

PALMAROSA is quoted at 9s. spot and to arrive 8s. per lb. c.i.f.

PEPPERMINT.—Japanese dementholised is quiet at 4s. 9d. per lb. for Kobayashi-Suzuki on the spot, and to arrive 4s. 5d. c.i.f. is quoted for October-November shipment. American natural is 10s. to 10s. 6d. spot, and to arrive 9s. 6d. c.i.f. is quoted in cases, and 9s. 3d. in drums. H.G.H. is 15s. spot and 14s. 6d. c.i.f. to arrive.

ROSE.—According to statistics published by the General-Direction of Statistics, Sofia, exports of Bulgarian otto of rose during June amounted to 817 kilos, valued at 90,422,000 leva, compared with 436 kilos, valued at 43,867,300 leva for the same month of 1929. For the January-June period

of the present year exports have amounted to 1,132 kilos, valued at 125,484,000 leva, compared with 711 kilos, valued at 65,299,000 leva, for the same period of 1929.

SPERMINT is unchanged at 14s. to 15s. per lb. c.i.f., new crop.

WORMSEED (CHENOPODIUM) is easier owing to lack of demand at 18s. 6d. to 19s. per lb. c.i.f. to arrive.

The following arrivals have taken place from the countries indicated during the period September 17 to September 23, inclusive: Almond (Neth.) 4 cs.; anise (H.-K.) 30 pkg., (Fr.) 7 pkg.; bergamot (It.) 7 cs., (Sp.) 6 cs.; cajuput (o. D. Poss.) 2 dm.; eananga (Java) 3 dm.; cinnamon (Ger.) 1 cs.; citronella (Cey.) 1 dm.; lemon (It.) 50 cs.; lime (Trin.) 1 cs., (o. B.W.I.) 13 cs.; mawa (Kenya) 3 dm.; nutmeg (Neth.) 2 cs.; orange (It.) 10 cs., (Neth.) 1 cs., (Sp.) 4 cs.; peppermint (U.S.) 8 dm., (It.) 6 cs., (Jap.) 10 cs.; pine needle (Ger.) 2 cs.; spearmint (U.S.) 2 cs.; thyme (Sp.) 6 cs.; ylang-ylang (Fr.) 8 cs.; undescribed (Fr.) 24 cs., (It.) 54 cs., (Aust.) 58 cs., (Neth.) 5 cs.

Pharmaceutical Chemicals, etc.

ONE or two minor changes are reported, being mostly due to severe competition, and, to some extent, lack of demand. Sodium bromide is weak as quoted; hexamine is a very keen market. Tartaric acid is unsettled, and may weaken from the present low price level. Citric acid and cream of tartar are the turn easier.

ACETANILIDE (B.P.) is steady on a slow market: crystals and powder, 1s. 4½d. to 1s. 6d. per lb., as to quantity.

ASPIRIN is quoted unchanged under Convention rates, but some second-hand parcels are offering at slightly easier prices: home trade, 2s. 9d. to 2s. 11d. per lb., as to quantity; export to British Possessions and Colonies, 10 cwt., 2s. 8d. up to 2s. 9½d. per lb., for small lots; export to other destinations, ¼d. to ¾d. per lb. more. Home and Continental prices are level.

BAREITONE is unchanged on a slow market: spot, 7s. to 7s. 4d. per lb., as to quantity.

BENZALDEHYDE remains in quiet demand with quantities in carboys offered at about 2s. per lb.

BENZOIC ACID (B.P.) is quoted at about 1s. 11d. per lb. for quantities, ex works: spot parcels, about 2s. per lb.; business is slow.

BROMIDES are about unchanged with competition for a limited business: ammonium, about 1s. 9d.; potassium, B.P., crystals, 1s. 5d.; granular, about 1s. 5d.; sodium, B.P., about 1s. 7½d. to 1s. 8d. per lb. for fair sized quantities; dealers' and makers' prices are about level.

CAFFEINE.—Pure crystals are offered at the cheaper rate of from 7s. 9d. to 8s. per lb. as to quantity.

CALCIUM LACTATE is a fairly good market at keen prices: quoted from 1s. 1½d. to 1s. 3d. per lb., as to quantity.

CHLORAL HYDRATE.—Duty paid crystals are very steady as quoted by home makers at 2s. 11½d. per lb., in boxes and 3s. 0½d. per lb. in jars; smaller lots, up to 3s. 1½d.; foreign, on spot, 3s. 3d. per lb.

CITRIC ACID (B.P. crystals) has been slow of sale, and business of any size has been difficult: foreign on spot is at about 1s. 6d. to 1s. 6½d. per lb., less 5 per cent. English makers quote 1s. 6d. per lb. less 5 per cent.

CREAM OF TARTAR is just about holding at the former rate of about 87s. 6d. per cwt., less 2½ per cent., for fair sized quantities of foreign on spot; business has been moderate. English makers quote 89s. per cwt., less 2½ per cent.

CREOSOTE (B.P.) is offering on spot at about 1s. 8d. to 1s. 9d. per lb., with business of no importance moving.

CREOSOTE CARBONATE is unchanged on a slow market: spot, 5s. 9d. to 6s. per lb., as to quantity.

GUAIACOL CARBONATE is seldom called for: quoted on spot at about 4s. 4d. to 4s. 8d. per lb.

HEXAMINE.—The volume of business passing is still limited, and there is keen competition in the region of 1s. 10½d. to 1s. 11½d. per lb., as to quantity.

HYDROQUINONE is steady but quiet: quoted at 3s. 7½d. for ton lots up to 4s. 5d. per lb., for small parcels.

LACTIC ACID (B.P.) is somewhat steadier at about 1s. 11d. to 2s. 1d. per lb., as to quantity and packing.

METHYL SALICYLATE (B.P.) is a good item with makers' and dealers' prices competitive at about 1s. 3d. to 1s. 5d. per lb., as to quantity.

METHYL SULPHONAL remains unsteady with dealers' offering spot at about 12s. 7d. to 13s. 10d. per lb., as to quantity.

PARAFORMALDEHYDE is meeting with a fair inquiry: prices are keen for any big business; 100 per cent. powder in kegs about 1s. 6½d., and smaller parcels at about 1s. 7d. per lb.

PARALDEHYDE is unchanged on a slow market at 1s. 1d. to 1s. 3d. per lb., as to quantity and packing.

PHENACETIN.—The Convention prices of 3s. 8d. to 3s. 10½d. per lb. as to quantity for crystals with powder 1½d. per lb. more are being discounted in some quarters.

PHENAZONE is not meeting with any big demand, and controlled prices are easy as quoted at 6s. 11d. to 7s. 3½d. per lb., as to quantity, for crystals, with powder 1½d. per lb. more.

PHENOLPHTHALEIN, although quiet, is fairly steady as quoted at 5s. 11d. to 6s. 1½d. per lb., as to quantity.

RESORCIN is offering on spot at about 2s. 11d. to 3s. 2d. per lb., with the demand quiet.

SALICIN.—With reference to the paragraph in last issue as to scarcity, it may be pointed out that makers are just now putting out the produce of this year's harvest so that at present the actual scarcity is not so acute as it has been, but the price has been fixed at 2s. 6d. per lb. higher than this time last year, and they are by no means sellers of any substantial quantity. No further supplies of raw material will be available for nearly a year, so it seems probable that before long the supplies will have to be doled out somewhat sparingly. Present list price is 18s. 6d. per lb.

SALICYLIC ACID (B.P.) is firm at home makers' prices of 1s. 5d. to 1s. 8d. per lb., as to quantity and packing.

SULPHONAL remains dull on spot, with dealers offering at about 10s. 1d. to 11s. 2d. per lb. as to quantity.

TANNIC ACID (B.P. *levis*) is well held on spot at the quoted rate of about 2s. 8d. per lb. for fair quantities.

TARTARIC ACID (B.P. crystals).—The position is becoming unsteady with a somewhat easier tendency despite the present low values. Following upon the break-up of the Italian-German agreement, it is now rumoured that the German interests have dissolved, and may become competitive. These movements are largely due to Spanish competition on this market. The spot price for foreign today is about 11½d. to 1s. per lb., less 5 per cent., as to quantity, but very little business is reported. English makers quote 1s. per lb. less 5 per cent. discount.

THYMOL seems a little steadier with prices for synthetic fine white at about 7s. 3d. to 7s. 6d. per lb., as to quantity.

VANILLIN is unchanged on a slow market: ex clove oil, about 12s. 6d. per lb., in cwt. lots; ex guaiacol, about 12s. to 12s. 3d. per lb. in cwt. lots; slightly lower prices in both instances for large quantities.

Industrial Chemicals, etc.

London, September 24.

ONE or two of the secondary products in this section are still easy owing to extremely poor business. Arsenic is healthy and material is very limited for near delivery and inquiry is now coming to hand from America.

ACETIC ACID.—Business has been on a limited scale, with prices steady: 80 per cent. technical, £36 5s.; 80 per cent. pure, £37 5s. per ton in barrels; glacial, pharmaceutical, 99 to 100 per cent., £58 per ton in glass demijohns; glacial in barrels, £47, carriage paid in U.K.

ACETONE is a slow market, but controlled values are steady: B.G.S., £71 10s. to £80 per ton, in drums, as to quantity, carriage paid in U.K.

AMMONIA (ANHYDROUS) has been somewhat quieter in demand: 99.95 per cent., in loaned cylinders, 10d. to 1s. per lb. carriage paid, and slightly less for large contracts.

AMMONIUM CHLORIDE continues to find a fair business: dealers' prices for grey galvanising are steady at £21 7s. 6d. per ton, in casks, ex store; slightly less for contracts.

ARSENIC.—This market continues steady to firm and supplies on the market are limited from all sources, there being little foreign offering for before November. Cornish white powdered is quoted from about £16 15s. per ton f.o.r. mines, and this figure about balances with values in America. Inquiry from the latter quarter is coming on this market.

FORMALDEHYDE is about steady on a keenly competitive market at about £31 per ton for 40 per cent. by volume, in casks, ex store; business is limited.

ISOPROPYL ALCOHOL has been in quieter demand, but prices are about unchanged, with reliable make at 10s. 6d. to 11s. 6d. per gallon, in drums, carriage paid, and slightly less for lower grades.

LEAD ACETATE is irregular on a slow market: spot, brown, £35; white, £36 per ton, in casks, ex store.

OXALIC ACID is still quiet but steady: quantities, £31 10s. per ton ex wharf; spot lots, 32s. per cwt. ex store.

POTASH CAUSTIC continues steady on a slow market at Convention rates: 83 to 92 per cent. solid, £29 10s. to £34 10s. per ton, in drums, ex store; 30s. per ton less c.i.f. in all cases.

POTASSIUM CARBONATE remains quiet, with dealers' prices unchanged: 90 to 92 per cent., £23 10s.; 96 to 98 per cent., £25 10s. per ton, in casks, ex store; slightly less for contracts.

POTASSIUM CHLORATE is very slow of sale and irregular on offer at about £25 7s. 6d. per ton, in casks, ex store; spot lots, about 3d. per lb.

POTASSIUM PERMANGANATE remains a slow market, with quantities of commercial quality in two-cwt. drums at 5d.

POTASSIUM PRUSSATE is steady on a slow market: yellow, quantities, £63 10s. to £65 10s. per ton; single casks, 7d.; small lots, 7½d. per lb., ex store.

SAL AMMONIAC is meeting with a fair business: dog-tooth crystals, £32; medium, £23; fine white crystals, £17 5s. per ton, in casks, ex store; slightly less for contracts.

SALTCAKE is moving well for home trade at about 55s. to 57s. 6d. per ton, in bulk, delivered.

SODIUM ACETATE is dull and easy at about £19 per ton.

SODIUM CHLORATE has been neglected: quantities, about £24 10s. per ton ex wharf; small lots, about 3d. per lb.

ZINC PRODUCTS.—The position of raw material is as unsettled as ever, with a renewed fall this week to the lowest record touched some time ago, and this is having a restraining influence on manufactured products, including zinc oxide. The larger makers of the latter are quoting about £25 up to £30, according to quality, but terms range up to about £40 for special qualities. Zinc ashes are now down at about £4 10s. to £4 15s. per ton f.o.t., basis 70 per cent. Zinc dust ranges from £22 5s. to £29 10s. per ton.

COAL-TAR PRODUCTS.—Conditions in this market continue unchanged, with the demand centred on such products as cresylic acid and carbolic acid crystals. ANILINE OIL and ANILINE SALT are unchanged, with the market quiet at about 8½d. per lb., packages extra, carriage paid. BETANAPHTHOL continues in a little better demand, with prices steady at about 9d. per lb., carriage paid. CARBOLIC ACID.—Crystals continue in fairly satisfactory demand, with the market steady: five-ton lots, 6½d. to 7d.; 25/50-ton lots, 6¼d. to 6½d. per lb., carriage paid or f.o.b. in drums with over-casks. Crude carbolic 60's continue from 1s. 6d. to 2s. per gallon, naked at works. CREOSOTE OIL is unchanged, with the shipment business still quiet at 4½d. to 4¾d. per gallon f.o.b. in bulk quantities; home trade, 4d. to 4½d. per gallon at works. CRESYLIC ACID continues in very fair demand and the market is steady: makers have adjusted their prices for some grades to slightly lower levels: dark 95 per cent., 1s. 5d. to 1s. 6d.; pale 97 to 99 per cent., 1s. 9d. to 1s. 11d.; refined, from 2s. 6d. per gallon; American duty-free quality, 1s. 8d. to 1s. 9d. per gallon f.o.b. naked. NAPHTHALENE is unsteady and quiet, with flakes and balls at £14 to £14 10s. per ton ex wharf. METHYL ALCOHOL continues in fair demand, with ton lots about £42, in drums, ex store; lower prices for large quantities. PYRIDINE is unchanged and slow of sale at from 3s. 6d. to 4s. per gallon, f.o.b. TOLUOL continues quiet and unchanged: commercial 90's, 1s. 10d.; pure, about 2s. 2d. per gallon ex works. XYLOL is unchanged, with the demand very quiet: commercial, 1s. 10d.; pure, about 2s. 1d. per gallon ex works. PITCH continues at the nominal figure of 47s. 6d. per ton f.o.b. East Coast; there has been little inquiry for the coming season, the market being flat of late.

Fixed Oils, etc.

FURTHER reductions in values of a number of products are recorded this week. Palm oils are quiet and easier. Linseed oil shows a big fall, and turpentine is about level on the week. ACID OILS.—Still lower prices are quoted with the market dull: coconut and/or palm kernel, 25s.; groundnut, 24s.; soya, 13s. spot. CASTOR remains dull and rather easy; pharmaceutical, 44s.; first pressings, 40s.; second pressings, 37s. spot, in barrels in not less than one-ton lots. COCONUT remains dull: deodorised, spot, 33s.; Ceylon, 26s. c.i.f. COTTON.—Values for all grades show a further slight reduction with the market dull: deodorised, 36s.; common edible, 34s.; soapmaking, 31s. 6d.; crude, 28s. spot. GROUNDNUT.—Deodorised, on spot, is steady at about 37s. 9d.; crude Oriental, 31s. 6d. c.i.f. PALM KERNEL is dull and easier: deodorised, 38s. 3d.; crude, 29s. spot. PALM has been quiet all the week, and

prices for all grades show a further slight reduction. Lagos, 22s.; softs, 21s. 6d.; mediums, 21s. 3d.; hards, 22s.; bleached, 24s. 6d. spot. RAPE is slightly easier on a slow market: refined, 36s. 9d.; crude, 35s. spot. SOYA remains dull, and is again slightly easier; deodorised, 34s.; crude, 26s. 6d. spot. LINSEED OIL (raw, naked).—This market shows a heavy fall in values for all positions, and the market is flat: on spot, 29s. 6d.; October, 26s. 7½d.; October-December, 26s. 3d.; January-April, 25s. 3d.; May-August, about 24s. 10½d. Boiled oil, spot, 33s. 3d. TURPENTINE.—The market fluctuated somewhat upward in sympathy with American cable advices, and in spite of the fact that American stocks have again increased considerably, although the receipts were much as they were before. Demand on this side has been poor, buyers being reserved, and quotations were about as follows:—Spot 35s. 9d., October-December 36s., and January-April 37s. 9d. Last week's deliveries were only 1,448 barrels, making a total since January 1 of 72,736 barrels against 72,837 barrels for the same period last year. Stocks were returned at 27,500 barrels, which, together with the quantities in the course of landing and afloat, made the total London visible supply 43,700 barrels. This compares with 27,353 barrels at the same date last year. RESIN.—There is only little alteration, and business has dragged, while the position is more or less dominated by the heavy accumulation of stocks in America. C.i.f. terms were as follows:—American B/D, 11s. 10d. to 11s. 10½d.; E, 12s. 3d.; F/K, 12s. 5½d.; M/N, 13s. to 13s. 3½d.; W/G, 15s. 4d.; and W/W, 16s. 5½d. per cwt. French is relatively dear as compared with American, except for the top grades, which stand at 12s. 10½d. for W/G and 15s. 3d. for W/W c.i.f. to arrive. WOOD.—Hankow in barrels on spot is easier on a dull market at 45s. per cwt.

LUBRICATING, MINERAL, BURNING OILS, ETC.—Benzol is nominal at the moment, pending adjustment of values to fall in line with the reduction in petrol. The same position arises with regard to solvent naphthas. Lubricating oils are dull and easy. Other items are about unchanged with business quiet. BENZOL is nominal at the moment with prices for standard motor 90's unchanged. The reduction of 2d. per gallon notified to-day in petrol is as usual likely to affect this market to some extent, and somewhat easier prices may be anticipated. FUEL OIL continues slow, with prices unchanged; 950 gravity, £3 5s.; 890 gravity, £3 17s. 6d. per ton, ex tank. PARAFFIN OILS are to-day quoted unchanged, but the market is tending easier: American standard white, 1s.; water white, 1s. 1d. per gallon, barrels free, ex wharf. PARAFFIN WAX and SCALE continue unsteady with business slow: wax, 1¼d. to 4¾d. per lb., according to melting point, in bags; scale for shipment is offered at about £12 5s. per ton, c.i.f. U.K. WHITE OILS continue slow with prices unchanged: Special No. 1, £24 5s.; No. 1, £23 5s.; No. 3 half-white, £20 2s. 6d.; No. 4 half-white, £13 2s. 6d. per ton, drums and barrels free, ex wharf. SOLVENT NAPHTHAS.—These items will, no doubt, be affected by the reduction in petrol, but it is yet too early to define the market: the old rates were 90-160, about 1s. 1½d.; heavy 90-190, 1s. 0½d. per gallon, naked at works. PETROL.—A reduction of 2d. a gallon in the price of motor spirit was announced on Sept. 22. In London, which is the lowest priced zone, petrol will now cost 1s. 4½d. a gallon instead of 1s. 6½d. In England, Wales, and Southern Scotland the new price will be 1s. 5d.; in outlying districts it will be 1s. 6d. PETROLEUM JELLES continue unchanged and quiet: white to snow white, £36 10s. to £46 10s.; amber and yellow, £18 7s. 6d. to £22; dark stiff green, £11 per ton, barrels free.

London Drug Auction

Commercial Sale Rooms,
Mincing Lane, E.C.3.
September 25.

THE moderate supplies offered by ten brokers met with a poor demand, but not worse than that which has characterised recent auctions. Cape and Curaçao aloes and buchu sold at steady prices. Sumatra benzoin realised full rates for good almondy seconds, and some unusually fine Saigon almonds were on offer, and held for a high figure. Calumba sold cheaply without reserve, and cardamoms were not adequately represented owing to the recent fire. Dragon's blood was in quiet demand at about steady prices for reboiled Singapore; very full prices continue to be paid privately for selected quality. Gamboge is lower and in better supply. Honey failed to sell in quantity. Sound Matto Grosso ipecacuanha is firmly held, the sales applying to mouldy only. Myrrh sold a triffo

under the valuations, and in rhubarb small sales were made at steady rates. Of sarsaparilla, not a package sold, probably owing to the fact that the export of preparations in one direction has largely fallen off. Small sales of Tinnevelly senna were made at previous prices, and for bees' wax there was no demand, although privately a fair quantity has been sold lately. The following table shows the quantity of drugs offered and sold, the asterisk indicating catalogued goods sold prior to the auction:—

Offered		Sold		Offered		Sold	
Aloes—				Honey—			
Cape ..	33	5	Cuban ..	65	0		
Curaçao ..	20	5	Jamaica ..	419	33		
Socotrine (kgs.)	35	0	Mexican ..	121	33*		
Zanzibar (cs.)	3	0	St. Lucia ..	12	0		
Ammoniacum ..	9	0	San Domingo ..	68	0		
Annatto seed ..	52	0	Insect flowers ..	5	0		
Balsam Peru ..	5	0	Ipecacuanha—				
Balsam tolu ..	14	1	Matto Grosso ..	9	2		
Benzoin—				Kino ..	5	0	
Palembang ..	9	0	Liquorice root ..	18	0		
Saigon ..	5	0	Myrrh ..	68	2		
Siam ..	11	0	Olibanum ..	127	0		
Sumatra ..	87	12	Orange peel ..	43	5		
Bois de rose oil ..	3	0	Palmarosa oil (pots)	7	0		
Buchu ..	33	3	Patchouli oil ..	5	0		
Calumba ..	199	20	Peppermint oil ..				
Camphor oil (cs.)	8	0	(Ch. dementh. cs.)	5	0		
Capsicums ..	112	0	Petitgrain oil ..	2	0		
Cardamoms ..	35	4	Quince seed ..	2	0		
Cascara sag. ..	50	0	Rhubarb (Ch.) ..	123	10		
Cascarilla ..	28	0	Rhubarb (Eng. cs.)	10	0		
Cashew nuts ..	179	0	Sandarac ..	20	0		
Cassia fistula ..	31	9	Sarsaparilla—				
Chamomiles ..	18	0	Grey Jamaica ..	47	0		
Cochineal ..	4	0	Guatemala ..	12	0		
Colocynth pulp ..	14	0	Honduras ..	19	0		
Copaiba ..	10	0	Mexican ..	10	0		
Cuscuta ..	32	0	Native Jam. ..	35	0		
Cuttle fish bone ..	90	0	Senna and pods—				
Dragon's blood ..	76	3	Alex. ..	171	0		
Eleudi ..	10	0	Tinnevelly ..	290	13		
Ephedra (herb) ..	3	0	Soy (Ch.) ..	5	0		
Ergot ..	69	0	Strophanthus ..	8	0		
Eucalyptus oil ..	60	0	Tamarinds (Barb.)	10	0		
Euphorbium ..	10	0	Tonka beans ..	43	0		
Galls ..	18	0	Tragacanth ..	1	0		
Gamboge ..	22	0	Tuba root ..	54	0		
Gingergrass oil (pots)	4	0	Turmeric ..	134	0		
Gran. parad. ..	3	0	Wax (bees)—				
Guaiaicum ..	18	5	Abysinnian ..	55	0		
Gum acacia ..	184	5*	Calcutta (white)	17	0		
Gum karaya ..	40	0	Conakry ..	50	0		
Gum (Madagascar)	29	0	Jamaica ..	7	0		
Gurjun oil (cs.) ..	11	0	Madagascar ..	46	0		
Henna leaves ..	63	0	Morocco ..	18	0		
Henna (powder) ..	24	0	Wax, carnauba ..	10	0		

Next and last Auction of the year—November 27, 1930.

ALOES.—Of Cape, five cases sold without reserve at 34s. per cwt. for fair seconds, part slightly drossy. A further lot of 15 cases of fair seconds, slightly drossy, were limited at 35s. Of Curaçao, 20 cases offered and five sold at 105s. per cwt. for common dark; dullish livery was limited at 110s. A new lot of 18 cases Socotrine was limited at 140s. per cwt. for mostly fair hard hepatic with an excess of skins.

ANNATTO SEED.—For a lot of 37 bags of mostly good bright Jamaica 4½d. per lb. was wanted.

BALSAM TOLU.—A single case of good hard bright sold at 3s. 2d. per lb., and a further 11 cases were held at 3s. 2d. for softish and part drossy.

BENZOIN was fully steady, the sales comprising ten cases of good Sumatra seconds, well packed with small almonds, at £8 per cwt. Good fair was limited at £7 10s. to £7 15s., and middling seconds at £6 to £6 10s. per cwt.; common to good streaky thirds from 75s. to 90s. Of Siam, nine cases offered, and for small to medium loose pale almonds £30 was wanted, pea and bean size £28, and grains £25, which price has been paid privately for the latter. An unusually fine lot of five cases Saigon offered, £33 per cwt. being wanted for small to extra bold pale selected loose almonds. Of Palembang, nine cases of thirds, with glassy centres, were limited at 65s.

BUCHU was steady, fair to good clean green round being limited at from 1s. 1d. to 1s. 2d. per lb. Three bales of yellowish bronzy round slightly stalky sold at 11d. per lb. Ovals were limited at from 8½d. to 9d. for bronzy.

CALUMBA.—A lot of 179 bags offered and 20 sold without reserve at a low figure, from 16s. 6d. to 17s. 6d. per cwt. being paid for small to bold bright of good colour. A fine lot of medium to bold natural was limited at 27s. 6d., with fair sorts at 25s. and sea-damaged at 22s. 6d.

CARDAMOMS.—Owing to the recent wharf fire, only a few oddments were offered. Two cases small to medium palish

Ceylon-Mysore sold at 2s. 9d. per lb., and for two cases palish Bombay seed 3s. 4d. was paid. At auction on Thursday, September 18, 21 cases Ceylon-Mysore offered and practically sold at and after the sale, comprising good medium bleached at 4s. 3d. to 4s. 4d., leanish 3s. 9d., small 3s. 3d., small leanish 2s. 9d., and medium splits 3s. 4d.

CASSIA FISTULA.—A lot of nine bags inferior wormy and part rattley pod brought from Coconada sold without reserve at 8s. per cwt.

COLOCYNTH.—For 14 bales of good pale pulped 8d. per lb. was wanted.

DRAGON'S BLOOD was in quiet demand at about steady prices, two cases of reboiled Singapore lump of slightly mixed quality selling at £30 per cwt. For a case of bag-shaped reboiled lump of fair colour a bid of £27 per cwt. is to be submitted. Small sales have been made privately, including fine selected reboiled at £41 10s. per cwt.

ERGOT.—A lot of 56 bags fair sound Russian was bought in, the broker intimating private sales of this quality at 10d. per lb. For 13 packages fair sound Portuguese from 2s. 3d. to 2s. 4d. was asked.

EUCALYPTUS OIL.—A parcel of 60 cases offered, B.P. quality, which was limited at 1s. 7d. per lb.

GAMBOGE was in larger supply. Five cases of Siam pipe, of mostly fair bright orange fracture, very blocky, were limited at £22, and for a further 15 cases from £20 to £21 was wanted for mostly good fair pipe, partly blocky.

GRAINS OF PARADISE.—For three bales, of which no sample was shown, 9d. per lb. was wanted.

GUAIAICUM was steady, three cases of good glassy lump selling at 2s. 3d. per lb. Fair was limited at 1s. 3d., and common drossy to ordinary, part drossy at from 4d. to 7d. per lb. Two barrels of fair glassy block had been sold privately.

HONEY was in poor demand, the sale comprising 21 barrels good pale set Jamaica at from 39s. to 40s. per cwt., with a few sales prior to auction; 20 cases dark brown liquid Mexican had been sold privately at 30s., and also 14 casks Mexican at a secret figure.

IPECACUANHA was firmly held, nine bales of Matto Grosso offering, of which six bales sound, of fair average quality, were limited at 12s. 6d. per lb., and for two bales of dull leanish part mouldy from 11s. 11d. to 12s. was paid.

MYRRH was a trifle easier, two bags of ordinary Somali sorts, slightly blocky, selling at 92s. 6d. per cwt.

ORANGE PEEL.—Five cases of ordinary dark Tripoli strip sold at 6½d. per lb.

QUINCE SEED.—A single bag of fair average Cape was limited at 4s. 3d. per lb., and for slightly poorer quality 4s. was wanted.

RHUBARB sold at steady prices, including two cases of medium to bold rough round High-dried with three-quarters fair pinky fracture at 1s. 3d. per lb. Of Shensi, for a single case of medium round, with two-thirds fair pinky fracture and one-third grey, 4s. 6d. was paid, and a case of medium to bold flat High-dried, with three-quarters fair pinky fracture, sold at 1s. 9d. Four cases of medium to bold rough round High-dried of inferior fracture and very wormy sold without reserve at from 7d. to 9d.

SARSAPARILLA was quite neglected owing to the fact that there is practically no export demand for preparations. Grey Jamaica was obtainable at from 1s. 5d. to 1s. 6d., and native Jamaica at from 1s. 2d. for common grey and yellow up to 1s. 9d. per lb. for good red.

SENNA.—Only retail sales were made, comprising three bales of medium to bold greenish Tinnevelly at 4d. per lb., No. 2 ditto at 3d., and ordinary small to medium 2½d. per lb. Three bales Tinnevelly sold without reserve, comprising common yellowish at 1½d., small dull at 2½d., and common bold at 2¾d. per lb. Five bales dark Tinnevelly pods sold at 2¾d. per lb., and up to 5d. was asked for picked. For good pale selected hand-picked Alexandrian pods 5s. was asked, and fair to good pods 3s. 6d. to 4s., but there were cheaper sellers in other directions.

SOY.—For five Chinese (Sueloong brand) 2s. 4d. per gallon duty paid was asked.

STROPHANTHUS.—Four bags of genuine 100 per cent. Kombe were limited at 5s. 6d. per lb.

TUBA ROOT.—A lot of 54 bags from Singapore was limited at 8½d. per lb. The analysis showed 12.6 per cent. ether extract and 10.7 per cent. moisture.

WAX (BEES') was quite neglected. Five barrels fair Jamaica mostly brown block were limited at £6 15s., 59 packages fair Madagascar block at £5, 55 packages Abysinnian at £5 to £5 5s., and 17 cases white Calcutta at £9 per cwt.



Letters for this section should be written on one side of the paper only. Correspondents may adopt an assumed name for purposes of publication, but must in all cases furnish their real name and address to the Editor.

The Late E. M. Holmes, Ph.C.

SIR,—Will you permit me to express briefly my deep appreciation of the friendship with the late Mr. Holmes, which was my great privilege for fifty years? It was in October 1880, on my entry as a student at "No. 17," that I first made his acquaintance. Throughout the intervening time my intercourse with him was close and inspiring. This is not the time to write of the work which we undertook together; but the work provided more opportunities for judging his character than the intimacy of an ordinary friendship. His never-ceasing industry in gathering knowledge from every quarter of the globe and his prodigious liberality in imparting it were a cause of wonder to all who knew him. No effort was too great for him to undertake to settle the daily problems in botany and pharmacognosy which were shot at him from almost every country in the world. Mr. Holmes possessed a remarkable gift for selecting young men, even very young men, to work upon the microscopical and chemical matters which came within his own immediate purview. Some of your readers will recall the names of men who became quite famous in fields of research into which Mr. Holmes managed to introduce them. The record of his writings reveals a depth of knowledge which has never been excelled in pharmacognostical science. His interest in the careers of his friends was continuous and, in not a few cases, even affectionate. A letter, written with his own hand, sent to me only a few days before the end, on an occasion of deep sorrow, was a touching expression of his solicitude. The breaking of such a friendship is a very great loss.—Yours sincerely,

WILLIAM KIRKBY.

Manchester.

SIR,—One cannot allow the opportunity to pass without adding a word of testimony to this ardent worker at the vegetable *materia medica*, and to thank you for giving such an admirable sketch of his life and research. He has been an acquaintance of many years. In 1873 he acted as the identifier of plants sent to the Society, and I owe him much for his kindly assistance. But he was unwearied in his efforts to help students. While acting as examiner I saw much of him and his work, and this work was not valued as it should have been. Holmes obtained a good knowledge of the moss and lichen flora, which he freely placed at my disposal when I wrote the "Botany of the Victoria County History of Buckinghamshire." Later he named the algae in the Oxford Herbarium. He was a competent authority on sea-weeds and added many species to the British list. He issued twelve monographs on "Sea-weeds," published a work on the "Mosses, Scale Mosses and Lichens of Devon and Cornwall," and wrote a "Botanical Note-Book." To the Victoria County History he supplied notes on the cryptogamic plants of Cornwall, Devon, Dorset, Hants and Kent and over 300 articles to THE CHEMIST AND DRUGGIST and the "Pharmaceutical Journal" on drugs and medicinal plants. He was a correspondent to the ordinary botanical journals of his time. His work was recognised, and he was rewarded by having the Flückiger Gold Medal (1897) and the Hanbury Gold Medal (1915) bestowed on him. Like R. Bremridge, Holmes was a long-lived officer of the Pharmaceutical Society, and during his long life he kept up his enthusiasm and retained his intellect to the last. He had the great pleasure of knowing that he was valued by his old pupils in many lands, who retained for him a very affectionate regard.—Yours faithfully,

G. CLARIDGE DRUCE.

Oxford.

Gift Schemes

SIR,—The letter of "Somerset" in the issue of the *C. & D.* for September 20 (p. 379) is to the point, and one of the best I have read for some time. It is quite time we, as a body, put our foot down on these "gift schemes," which do not bring any custom whatever. We simply become collectors of coupons for some rich firm or other, and, personally, as soon as a traveller calls on me suggesting any such scheme I turn him down, and I have yet to learn that I lose by it. Unfortunately there is not that unity amongst the members of the local associations that there should be. We find presidents and other officials countenancing, in their own shops, the "pay an extra penny and receive two articles for the price of one" idea. The newly-fledged members who have lately started in business are apt to take their cue from the officials, and it is a bad beginning for them. We are drifting, and drifting badly, but there is still time for the "backsliders" to pull up, and remember what it cost them to qualify, and that their training and qualifications should ensure them becoming something better than "touts" for questionable "Yankee" schemes.—Yours truly,

SURREY (24/9).

SIR,—I am glad to see from your correspondence column that there are other chemists besides myself who cannot see what advantage accrues to the retailer by the adoption of these gift schemes. In the latest one, as I read the details of the circular, the chemist has to buy a gross of soap in order to supply twenty-four customers with three tablets at the price of two, and having done so he has half a gross left on hand. What is he to do next? As twenty-four sales of a well-known article, with one thrown in for nothing, does not appear to me to be an extravagant expectation from a window display in a reasonable shopping thoroughfare, it would seem that the chemist then has a choice of three alternatives—first, he can withdraw the display and inform any other customers who may ask for a gift that the scheme is over, thus disappointing them and driving them to some other shop, which has not sold so quickly; second, having half a gross left, he can go on with the scheme out of his own pocket rather than lose a customer at any price; third, he can go on ordering grosses in order to continue supplying twenty-fours, and also to keep on piling up half grosses which do not rank for gifts. Probably this is what it is hoped he will do. I shall not have to make a choice between these three courses nor a window display.—Yours faithfully,

LONDONER (22/9).

Pharmaceutical Society's Disclaimer

SIR,—Some members of the Society have received during the last few days a letter printed in imitation type-written characters with a printed envelope addressed to the president of the Society for the letter to be sent to this address. The letter protests against the presence of women in pharmacy in terms most charitably described as childish. My only reason for drawing attention to the letter is that one or two who have received it have been led by the printed envelope to ask whether it originated from 17 Bloomsbury Square. I need scarcely assure them that it did not nor need I suggest its proper destination.

Yours faithfully,

HUGH N. LINSTAD, Secretary.

London, W.C.1.

Approved List of Photographic Dealers

SIR,—Some days ago I had occasion to order a special line from a wholesale photographic firm. I was very surprised when I was told I could not be supplied as my name was not on the list of approved dealers. As I have been a member of the Photographic Dealers' Association since the commencement, and am also on the committee for the Western area of London, it did not seem correct. However, I made inquiries and found it was a fact. Having been a dealer in photo-

graphic goods for nearly twenty years the error was soon rectified. A brother chemist not far from me had a similar experience. As similar cases might arise at any time, I should advise every chemist who is an approved dealer to inquire if his or her name has been omitted from the list.—Yours faithfully,

W. CLARENCE TARRY.

London, W.

Irish Pharmaceutical Council Election

SIR,—The seven members of Council of the Pharmaceutical Society of Ireland retiring by rotation included Dr. J. A. Walsh, who did not offer himself for re-election. To fill this vacancy I have nominated Mr. Thomas J. Smith. He was seconded by the outgoing member, Dr. Walsh. This speaks for itself. I am convinced that his selection was in the best interests of the Society. Mr. Smith is an idealist who is proud of his craft, and will be of enormous help to the Council in the important work that always follows new legislation, the modernising of the educational work of the Society, the revision of the syllabus of examinations, clearing the way for the suggested division of the Licence examination, etc. For the one vacancy the vice-president and honorary treasurer have nominated Messrs. Gubbins and Fitzpatrick. It is obvious that a dual success is meant to displace one of their retiring colleagues. Who? Why? Every vote for Mr. Smith is a negation of such policy.—Truly yours,

FRANK FITZPATRICK,

President, Pharmaceutical Society of Ireland.

Dublin.

[Mr. J. Fitzpatrick, who is seeking election to the Council, should not be confused with Mr. F. J. Fitzpatrick who holds office as president.—EDITOR.]

Attendances of Pharmaceutical Councillors

SIR,—Further to the letter of "Limerick" in your issue of September 20 (p. 379). It appears from the report of the Council meeting on page 363 that only eleven members of the Council attended for such an important matter as the consideration of the new Pharmacy Bill. I wonder why this lack of interest. The coming election affords an obvious remedy.

Yours truly,

PHARMACIST (22/9).

Drugs from Slot Machines

SIR,—I think it will be agreed by most chemists who look a little further than their immediate returns that anything which tends to discourage the adoption of automatic machines for the sale of drugs will ultimately be for the good of pharmacy, and help to keep up what little status we may possess. With the multiple machines now being put on the market there are slots for a dozen or so different articles, and such a range of drugs could be included that many counter sales would be superseded; and by a little imagination one can foresee the future pharmacy run on the lines of the automatic saloon where one can look at pictures, hear gramophone records, buy sweets, cigarettes, and so on. One thing, of course, could not be delivered from the machine, and that is the advice on all minor troubles and ailments which the chemist has to provide gratis to the public daily, and which is euphemistically entitled by writers on salesmanship as "service," although it is quite possible, since automatic machines for supplying drugs need not necessarily be on chemists' premises only, that the chemist would still be expected to provide the advice, while the grateful customers put their sixpences in somebody else's slot.

Faithfully yours,

AUTO (14/8).

Shop Hours and the Will to Work

SIR,—I am not in favour of early closing for two very good reasons that have always puzzled me why they have not carried weight. The first is the dog in the manger attitude which throttles the little man and has done more than anything to stifle ambition and

enterprise. Why should you demand the man up the street to close, just because you wish to? Greediness, that is all it really amounts to. Secondly, in so doing have you not played directly into the hands of the stores, whose aim is to crush the small shopkeeper out of existence? To-day, working folk in crowded cities who desire to make purchases are compelled to do so largely in their dinner hour, and what a fortune it is for the stores. Otherwise one rushes home to the local shops only to find assistants inattentive, running off to wash, or watching the clock, to close up. This is not fiction, it is fact. The remedy is, let the shops keep open, have inspectors, fines and so forth to see they do not put it on the poor assistants, who dare not work a moment longer than the precious eight hours. That will provide work for the many willing workers, and do more than any fanciful scheme to lower the scandalous unemployment figures, which, after all, are only a result of this will not to work. There are, of course, many exceptions to this argument, but really shop hours are too restricted to-day. No one wishes to see the bad old hours return, but let us have a little more freedom, give others a chance to work that will. There are many old ones that would be only too glad to do it, unfortunately replaced by these favoured clock-watchers.—Yours faithfully,

JOHN J. BRYANT.

London, E.C.

Both Sides of the Atlantic

SIR,—The photographs of Canadian pharmacies and the article accompanying them (*C. & D.*, September 6, p. 308) give us some insight into the way in which our business is carried on in the new world, but can we really consider the conditions as an advance on our methods, looking at them from a pharmaceutical viewpoint. In the photograph of the drug store the fascia is given up to bold lettering announcing Luncheonette, Soda Fountain, Lending Library, and Candy, and except the name of the firm there is no indication of what is presumed to be the primary business of the store. Then three of the interior views are of soda fountains and their accompanying marble serving counters, and another shows a toilet department festooned round with triangular bills such as are pasted on the outside of the windows of our sixpenny bazaars, and, to an English eye, looks untidy in the extreme. It is, of course, no use criticising the methods of other countries, because they have to be adapted to the requirements of their public, but it would seem from these photographs that they embody all that we decry so much when applied to ourselves.

Yours faithfully,

ANGLICE (15/9).

Subscribers' Symposium

For interchange of opinion among "C. & D." readers and brief notes on business and practical topics.

Appreciation

I take this opportunity of thanking you for so regularly each Friday morning delivering me my *C. & D.*, which, needless to write, I always eagerly welcome, because not only does it keep one well in touch with trade and professional matters, but the splendid advice I have picked up from it has been most helpful, and has easily been worth its weight in gold.—X. Y. (17/7).

Ophthalmic Tobacco

I remember noticing in the "Weekly Journal" of June 18, 1720, an assertion, which for sheer quackery would be difficult to surpass: it relates to "the famous Ophthalmic Tobacco, which smokes very mild . . . and is sold at three Shillings per Pound; you may smoke any other Tobacco at any time: Ancient Eyes will find the good Effects in about nine Months time to see to read and write without Spectacles . . ." —A. E. (5/7).

Dispensing Notes and Difficulties

Carbolic Acid Solution

SIR.—A dentist customer of mine uses a 5-per-cent. solution of carbolic acid to which is added glycerin in the proportion of one ounce to the pint of carbolic solution. After a couple of days a dark brown flocculent precipitate comes down. Can you tell me what this is and what it is due to?

Yours faithfully,

F. P. (30/6).

[We have made this solution, using pure crystalline phenol without getting a precipitate. Carbolic acid becomes pink, red or brown by exposure to air. Boiled distilled water should be used in making the above solution, as the presence of ammonia gives a colourless solution which finally becomes purplish-blue. Carbolic acid is readily soluble in glycerin, which reduces its caustic and poisonous effects. If the carbolic acid is commercial liquid carbolic acid, such as is used for disinfecting, substances are frequently in solution as impurities which will give the effect stated. Boiled distilled water and pure phenol and glycerin will make a good keeping solution. Dissolve the phenol in the glycerin first.]

Mixed Powders

SIR.—I would like to know whether any incompatibility exists between common potash alum and potassium permanganate when mixed in the dry state together.

Yours faithfully,

WARWICK (19/5).

[There is no chemical incompatibility between the alum and potassium permanganate, and when mixed simply in a dry state no change should take place. If tablets are to be made, be careful not to granulate the powders with any oxidisable substance.]

Legal Queries

F. S. (19/8).—Liability to medicine stamp duty in the case of the labels submitted by you is incurred by the use of the title "Cough Syrup" in one and by the references to "purification of the blood" and "gout and rheumatism" on the other labels.

R. C. (3/7) is obtaining a loan from an insurance company to enable him to purchase a house. Is it necessary for him to employ a solicitor in this connection, or is the agreement in a form that cannot be altered? [It is improbable that the insurance company would accept any alteration of the terms upon which it is prepared to make an advance.]

A. J. R. H. (1/8).—An essential oil usually made use of for the purpose of scenting or flavouring any snuffs may legally be used for communicating scent or flavour to snuffs which comply as to their composition and freedom from adulteration with the requirements of the law relating to the manufacture, composition, and sale of snuff. If, however, such oils require before use to be dissolved in some solvent in order to enable uniform distribution of the scent or flavouring to be made throughout the mass, it will be necessary for you to ask permission of the Board of Customs and Excise, Custom House, London, E.C.4, to be allowed to use the essences so prepared. You will be required to submit to the Board for examination by their chemical advisers a sample of the essential oil proposed to be used, together with a sample of the solvent in which you propose to dissolve it. Further, you will require to be licensed as a manufacturer of snuff in order to be at liberty to make snuff from a tobacco base, and the premises on which you carry on the manufacture will be subject to the revenue restrictions applicable to such premises. Upon this you should apply to the local officer of Customs and Excise for such further particulars as you may require.

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for, and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

A. McC. (17/5).—STOMACH POWDER.—This powder is to a prescription now lost. It was found to contain sodium, magnesium and bismuth carbonates, approximately in the proportions of 40, 8 and 52 parts.

J. C. S.—WEED KILLER NO. 1.—This is a fine glistening crystalline powder consisting of sodium chlorate. —WEED KILLER No. 2.—This fine granular powder contains 98.4 per cent. of sodium chloride with small quantities of calcium and moisture. It is merely granular common salt.

T. V. T. (7/8).—PLANT FOR IDENTIFICATION.—The plant enclosed with your letter is *Listera ovata*, N.O. Orchidaceae, a very common orchid that is found as a rule in dark woods. Its English popular name is Twayblade, because the plant only bears two leaves.

F. A.—EARWIG EXTERMINATION.—Poison baits are the best means of controlling these insects, and formulas for such preparations are as follows:—

I		III	
Sodium fluoride ...	1 part	Sodium arsenite ...	1 gm.
Sugar ...	2 parts	Molasses ...	10 c.c.
Cornflour ...	2 parts	Bran ...	90 gm.
		Water ...	100 c.c.
II		IV	
Tartar emetic ...	1 part	Cocoa powder ...	4 oz.
Brown sugar ...	2 parts	Starch ...	8 oz.
		Sugar ...	8 oz.
		Borax ...	37 oz.

The bait should be scattered over the ground during a spell of fine weather. The general applications should be followed up with small amounts applied to trees, walls and other objects several times during the late summer to catch the earwigs after they begin to climb at night. In any attempts to control the pest the co-operation of neighbours is essential.

C. V. H. (12/9).—BOOKS ON STARCH PRODUCTS.—The following recent works should meet your requirements:—"Starch: Its Chemistry, Technology and Uses," by Lewis Enyon and J. H. Lane; "Starch and Starch Products," published by Isaac Pitman & Sons, Ltd., Parker Street, London, W.C.2; "A Comprehensive Survey of Starch Chemistry," by R. P. Walton.

The Apprentice (18/9).—A letter sent to the address given in your communication has been returned by the Post Office marked "Not known."

Retrospect of Fifty Years Ago

Reprinted from

"The Chemist and Druggist," September 15, 1880

Owens College

The session at Owens College, Manchester, which commences on October 5, will be the first for "Owens" as a College of the new Victoria University. The Victoria University is in some respects peculiar, but it was to meet a peculiar want that it was supplied. It differs from the University of London in being a teaching besides an examining body, and it differs from the Universities of Oxford and Cambridge in the fact that its colleges are to be situate in more than one town. At present "Owens" is the only College of the University, but "wherever a College is recognised as of adequate efficiency and stability," it will be made a "College of the University." As the charter of the Victoria University is only dated April 20, 1880, we have yet to wait for at least some weeks before the statutes can be published. . . .



[Commenced *C. & D.*, July 5, 1924]

Statute Law.—That part of the law of the country which is imposed by Act of Parliament is sometimes referred to as "Statute Law" to distinguish it from the Common Law, which is based upon immemorial principles of justice for which there is no specific written authority.

Stipendiary Magistrate.—In many cities and large towns a salaried magistrate is appointed to administer justice in the police court. The stipendiary, as he is called, must be a barrister. He is entitled to perform alone the duties for the exercise of which the services of two justices of the peace are necessary; but he cannot sit at general or quarter sessions. A stipendiary may, however, preside at a licensing sessions.

Stock Bottles.—For the most part stock bottles are those used by the wholesaler for the dispatch of drugs and chemicals. The result of this is a want of uniformity in the arrangements of the stockroom. It is a good plan, where possible, to have suitable containers for stock as fixtures; by this means checking and keeping stock is made easier. The old practice of having things in parcels should be done away with, as nothing leads more surely to waste and deterioration. Moreover, setting aside containers for keeping stock allows of the attachment of quite useful information invaluable in stocktaking, buying, and incidentally in selling larger quantities which might warrant a special price.

Stock Exchange.—The London Stock Exchange is an unincorporated company, founded in 1773, the members of which are engaged in the purchase or sale of securities and shares. The members pay an annual subscription and have to provide guarantees as to their financial and moral soundness. A committee is elected annually by the members, which has power to make rules governing transactions on the Exchange. Rules and usages of the Exchange are binding upon outsiders only if they are reasonable or have been agreed to by them. Members of the "House," as the Exchange is called in the city, are brokers and jobbers or dealers. The former deal with non-members and the latter buy and sell on their own account and deal with other members only. There are Stock Exchanges in several provincial towns, which are conducted upon the same lines as the one in London.

Stocktaking.—Stocktaking is now practically universal in pharmacy, owing to the activities of the income-tax assessor. The simplest way of taking stock is to split the business into units, such as shop, stockroom, dispensing department and any other which can be sectionalised. Before beginning, the containers in the units should be filled from the stockroom; and if these containers are carefully arranged and the receptacles from which sales are made are filled as nearly as possible, the stock of all these things will vary very little from year to year. Once a tabulated price list has been made, it can always be used for a guide and costs made as the stock is taken. The display sections will have to be taken separately. In the dispensing department the method is the same. It is surprising how easily stock is taken on such lines. In the stockroom the method is equally simple, as all containers in which recognised stock lines are kept, most of the information necessary will be entered on the labels. If the method of departmentalising is adopted, the process of stocktaking can be carried through on a few successive days. Stock-sheets are exceedingly valuable, and for this purpose the Stocktaking Sheets of the *C. & D.* in the form of a writing-pad, make the process easy and provide

a record from year to year. The following hints taken from the *C. & D.* pad are illustrative of the best method of approach and attack of this business duty of stocktaking:—

"Stock means goods that are for sale. Fixtures are items for the capital account and are valued separately. The best way to use the *C. & D.* Stocktaking Sheets is for one person to call out the quantity of the drug or chemical and for another assistant to enter this in the appropriate position on the stocktaking sheets. The stock in the storeroom can be taken separately so long as provision is made for the control of any goods passing between store and shop. In this case two pads will be found useful and a combination of the pricing totals made afterwards. By the use of the *C. & D.* Retail Price List it will not be necessary to consider depreciation or appreciation, since all prices given there are current. It may, however, be necessary to write off dead stock. The quantity-price should be that which can be expected to be purchased at reasonable intervals or used in dispensing. The arrangement of the items in the stocktaking sheets corresponds with the *C. & D.* Retail Price List, and the prices in the latter are those current at the time of issue. When the stocktaking is finished extend the cost by means of the *C. & D.* Retail Price List and transfer the total of each numbered column to the specially ruled sheets provided at end of the pad. Where articles are in bulk and a lb. price is given, subdivide or multiply as the case may need. Where syrups or glycerin are taken by volume divide the lb. cost by twelve to get the fluid ounce cost. In the case of tinctures or spirits where a lb. cost is given, divide the cost by eighteen in order to get the price of a fluid ounce. Where ounce cost is given divide by seven in order to get drachm price. Where drachm cost is given divide by fifty in order to get the grain price. Proprietary lines and druggists' sundries are best arranged and grouped according to cost: 100 lines at x and so on. Cash taken on stocktaking day, with wholesale accounts due for goods received, amounts outstanding to customers, balance at the bank and any cheques not yet passed through should all be noted for the final making up of profit-and-loss account."

Storax.—Storax is a viscous fluid oleo-resin with a sweet, oriental type of odour. It is of great value to the perfumer owing to this odour, and also its high fixative properties. It is a pathological secretion obtained from the tree *Liquidambar orientalis* by wounding the bark. The tree is a native of the south-west portion of Asiatic Turkey. Injuries are inflicted by beating the tree, so that numerous oleo-resin ducts are formed. In the early summer the outer bark is stripped off and kept for fumigation purposes; the inner layers are scraped off and pressed in bags in a strong press. The bark, which still contains much oleo-resin, is then boiled in copper vats and the extracted matter is separated from the water. Various methods of incision have been tested. Bleeding to death and also vertical and horizontal incision have been tried, and the last of these has been found to give the best results. A strip of bark 6 to 12 cms. wide is removed from two-thirds of the circumference of the trunk. By these means an average of nearly 73 grams of liquid storax may be obtained during the summer days, as against 40 grams by the vertical incision method and 43 by the bleeding-to-death method. The horizontal incision method can be worked frequently throughout each year. Crude storax is sometimes obtained unpressed, in which state it is an opaque, greyish viscid substance containing dirt, bark and up to 30 per cent. of water. It has a small use in medicine, and is official in the British Pharmacopoeia, the requirements of which are:—"Brownish-yellow, viscous, transparent in thin layers. Entirely soluble in alcohol (90 per cent.) and in ether. Odour and taste agreeable and balsamic. Boiled with solution of potassium chromate and sulphuric acid, it evolves an odour of benzaldehyde. Loses not more than 5 per cent. of its weight when heated in a thin layer on a water bath for one hour. Acid value not less than 60 and not more than 90. Ester value not less than 100 nor more than 146. Yields not less than 20 per cent. by weight of cinnamic acid when tested under following process. . . ." A method of test is then set out. Storax

The C.&D. Commercial Compendium

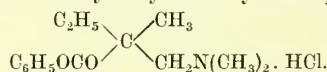
was once much adulterated with fatty matter and rosin, but to-day the main matter for fraud is the abstraction of the odorous matter and the sale of the remaining product as the genuine article. Storax has the following characters, according to Dieterich:—Moisture, 26.2-41 per cent.; ash, 0.5-0.92 per cent.; soluble in alcohol, 57.14-65.49 per cent.; insoluble in alcohol, 1.45-2.61 per cent.; acid number, 59-71; ester number, 35.4-74.4; saponification number, 104.7-135.4. Umney puts the acid value at 60-90, the ester value at 100-140, and the cinnamic acid at 12 to 25 per cent. Storax is practically completely soluble in alcohol, ether, chloroform and acetic ether. The so-called American storax is obtained from *Liquidambar styraciflua*, which tree flourishes high up in the mountains of Honduras. To-day it is little seen on the market. For many years *Liquidambar orientalis* has formed the chief source of supply of the whole world. The methods adopted in the Honduran forests for collecting the gum are determined by the degree of difficulty of access. On the outer surface of the bark a slight excrecence appears, which eventually develops into a pocket in which the balsam is hidden. If these pockets are near the base, the tree need not be destroyed, but when they are high up the tree must be felled. Not all the trees, of course, are balsam bearers—in fact, about one tree in one hundred square yards is about the average. Once the tree is felled a cut is made in the excrecence and the liquid collected into containers, which are in turn emptied into 50lb. containers. These have to be handled by natives very often for ten or a dozen miles before mule transport can be used, and even then the journey is hazardous to a degree, the country being without roads and precipices abounding. The lumber is useless, as it cannot be got down to civilisation. An average sample of American liquid storax has been found to be as follows:—Incineration residue, traces only; purified balsam, 85 per cent.; saponification number of purified balsam, 179; acid number of purified balsam, 41. The essential oil is present to the extent of 0.5 to 1 per cent. and is highly aromatic. Its characters are as follows:—Specific gravity, 0.950 to 1.050; optical rotation, $+1^{\circ}$ to -35° ; refractive index, 1.5395 to 1.5653; acid value, 1 to 26; ester value, up to 130. The oil contains styrol, C_8H_8 , and the cinnamic acid esters of ethyl, benzyl, phenyl-propyl and cinnamyl alcohols, vanillin and free alcohols. The main adulterant of the oil is benzyl benzoate.

Stone root.—This is a North American drug but little used in this country. The plant yielding it is *Collinsonia canadensis*, Linn., a native of Canada and of the Eastern and Central United States. It belongs to the Nat. Ord. *Labiatae*, and is a perennial herb about three feet high, with ovate leaves and yellowish slender flowers in paniced racemes, the lower lip of the corolla being fringed, and with two exerted stamens. The fresh plant has an agreeable lemony fragrance, but when the leaves are rubbed a strong and less agreeable odour. The plant has several vernacular names indicating the character of the plant or its uses, such as citronella, horse balsam and knob root. The dried root is a nearly horizontal and irregularly branched rhizome, hairy, including its branches, a length and width of three to six inches, and on its upper side a very knotted and tubercular appearance from the numerous short projecting branches and the numerous shallow concaved stem scars. The lower surface is much less knotty, and bears many thin nearly simple roots or their remnants. The thin bark is externally of a greyish or yellowish-brown colour, and has a slightly nauseous and pungent taste. The woody centre is very hard and white, forming irregular wedges. The rhizome contains a glucosidal saponin, a resin and tannin. The statement that it also contains a crystalline alkaloid possessing diuretic properties requires confirmation. The dried rhizome is regarded as having diuretic, tonic and diaphoretic properties, and is used as an antispasmodic in gastric and intestinal flatulence and

in kidney diseases. The powdered root is sometimes used for piles in suppositories of fifteen grains each. An eclectic resinoid named Collinsonin is given in doses of two to four grains. It is prepared by pouring a tincture of the drug into water and collecting the precipitate. The dose of the tincture (B.P.C.), 1 in 10, is $\frac{1}{2}$ to 2 fluid drachms. Hot infusions have been used in the treatment of fevers and muscular rheumatism, and cold decoctions made from the fresh root have been employed in the treatment of gravel, whence the name Stone Root, also vesical catarrh, dropsy and leucorrhœa. It appears to be largely relied on by veterinary surgeons in the United States as a diuretic remedy for horses, hence its name horse balsam or horse weed.

Storm, Insurance Against.—See Insurance: Storm.

Stovaine.—The researches leading to the discovery of this local anæsthetic were based on the facts that the local anæsthetic cocaine is the methyl benzoyl derivative of an amino-alcohol, ecgonine, which shows no anæsthetic action. This suggested the investigation of the methyl benzoyl esters of other amino-alcohols, particularly those not having a piperidine nucleus which appeared to be responsible for some of the toxic effects of cocaine. As a result, in 1904 Fournau prepared stovaine (French, *fournau*=stove), which is the proprietary name for the hydrochloride of benzoyl-ethyl-dimethylamino-propanol:—



It can be obtained from monochloroacetone, which is converted into chloropentanol by treatment with magnesium ethyl bromide. The chloropentanol is heated with dimethylaniline, and the resulting dimethylaminopentanol is converted to stovaine base (amylocaine) by treatment with benzoyl chloride. Stovaine occurs in small white crystals, soluble in water, 1 in 13; and in alcohol, 1 in 3; it is insoluble in ether. The aqueous solution can be sterilised by heat below 115° . The crystals melt at 175° . Alkalis decompose stovaine, giving a precipitate of the sparingly soluble amylocaine base. Its principal use is in the production of spinal analgesia, and the successful employment of this type of anæsthetic dates from the introduction of stovaine, although partially successful experiments had been made six years earlier. For this purpose, from 1 to 25 mls. of a 1 per cent. solution are injected, usually with glucose or dextrin. The drug is stated to have only one-third the toxicity of cocaine. Spinal anæsthesia has the advantages of lessening surgical shock and of not causing post-operative vomiting; occasionally a severe headache is produced, and a partial paralysis which, very rarely, is permanent. Stovaine is also used as an eye lotion, as an ointment for hæmorrhoids, and in suppositories.

Strainers.—Used in the process of colation or removing solid particles from a liquid. Strainers are usually made from fabrics such as felt, flannel, muslin or cheese-cloth. Felt and flannel strainers are frequently conical-shaped and allow the liquid to pass through slowly; muslin and cheese-cloth may be fitted to wooden frames studded with nails to hold the material in position. The process of straining can be forced by twisting the strainer and so exerting pressure.

Street Trading.—Trading in the streets from stationary stalls, barrows and the like is controlled by local authorities, which, in many places, authorise that form of trading upon specified sites, subject to whatever restrictions may be thought fit. For trading from door to door, either from a vehicle or on foot, a licence is required (see "Hawker's Licence" and "Pedlar's Licence"). There are statutory restrictions upon the employment of children and young persons in street trading. By the Shops Act, 1912, it is made illegal to carry on in the street a retail trade or business of any class at a time when it would be unlawful to keep a shop open for the same class of trade or business.

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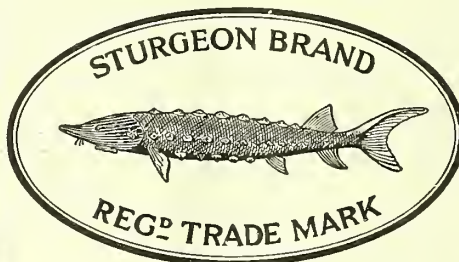
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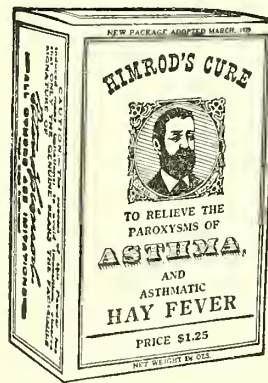
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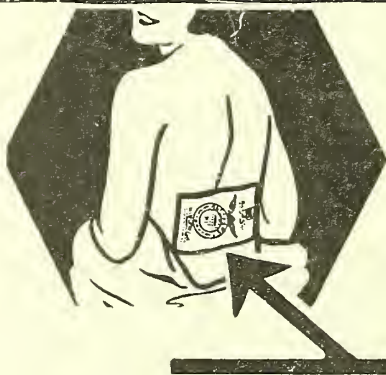
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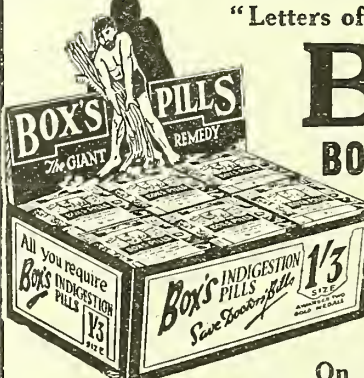
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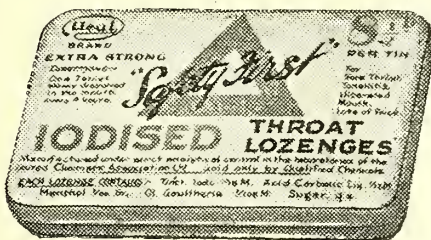
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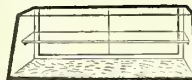
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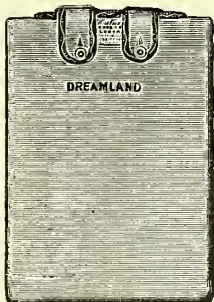
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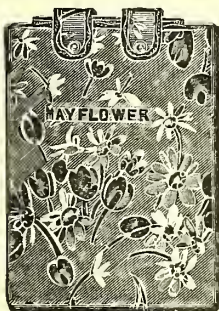


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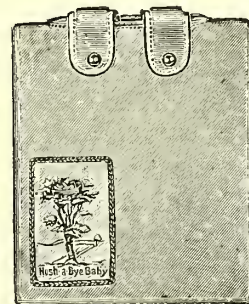
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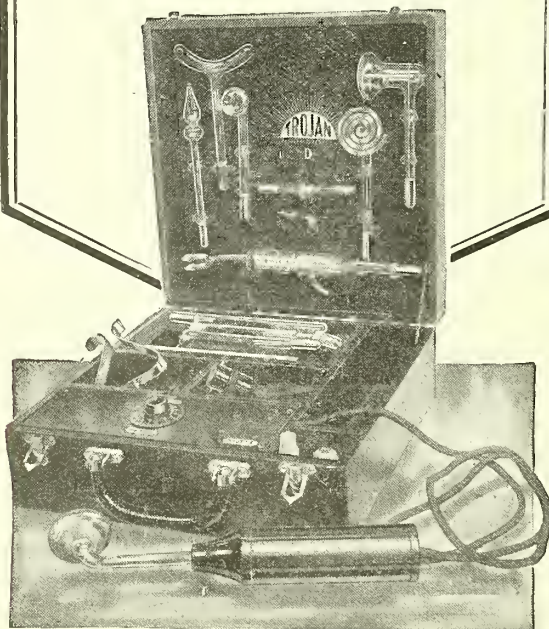
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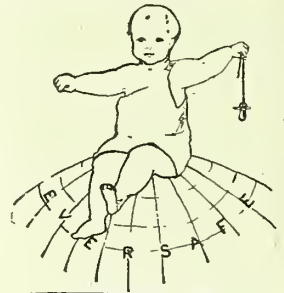
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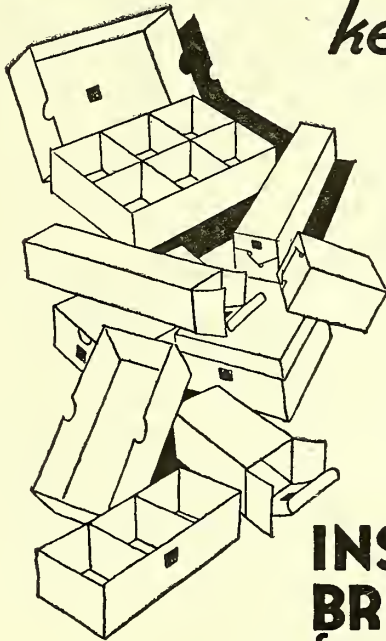
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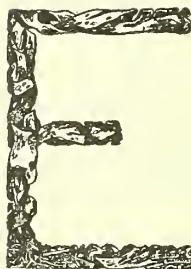
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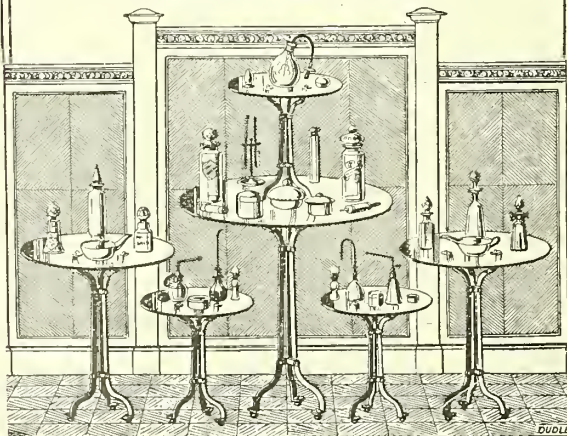
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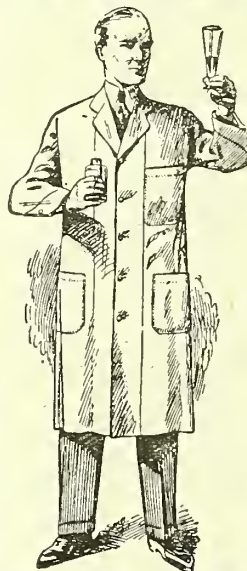
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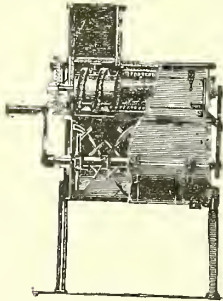
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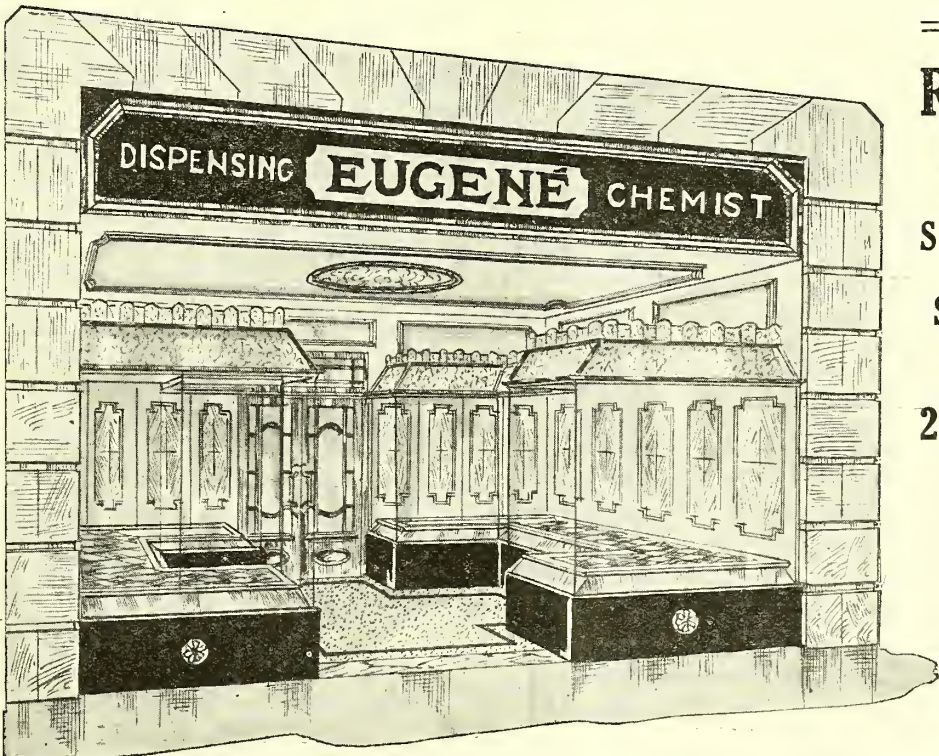



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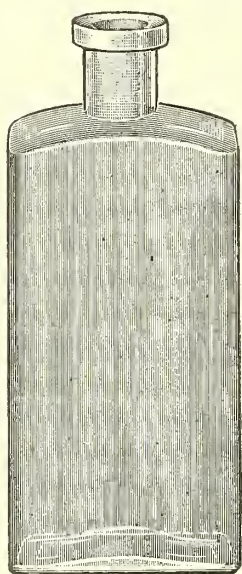
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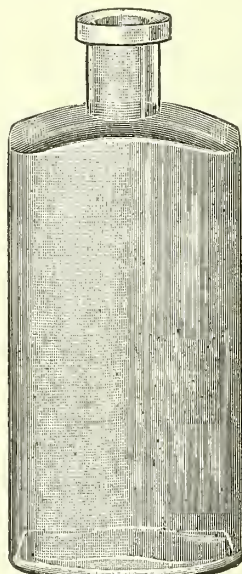
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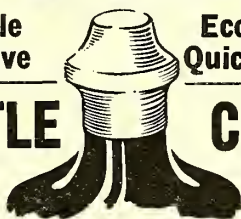
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GLASS BOTTLES and JARS

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VIALS, plain and graduated, in cartons.
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ESSENCES, round and oval. MINIATURES.

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OPAL POTS, square, round and octagonal,
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Cheap Bottles at the best are a poor investment. Usually indifferently made, of poor metal—unevenly shaped—badly coloured, and of incorrect capacities—they cannot add prestige to your products.

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There is nothing quite so effective in attracting the buying public as properly placed brilliance. That is why so many successful retailers make their windows and shop interiors brilliant and inviting with

COSMOS PEARL LAMPS

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NEW REDUCED PRICES

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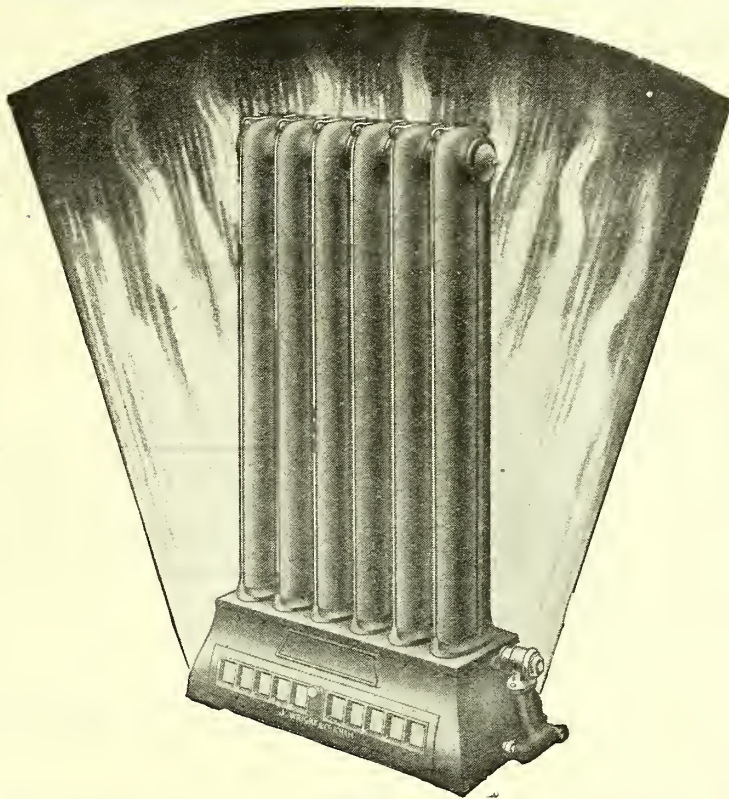
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SUBSIDIARY OF ASSOCIATED ELECTRICAL INDUSTRIES LIMITED,
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WRIGHT'S "Regulo"-controlled Gas Radiators fulfil all requirements in the heating of every class of building.

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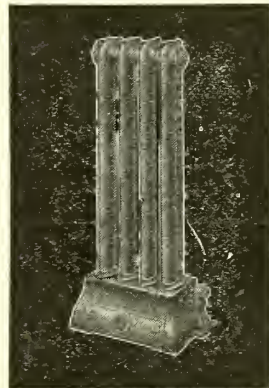
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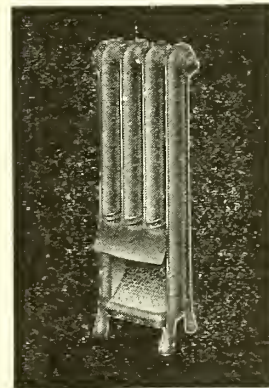
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"Regulo"-controlled.

For Theatres, Cinemas,
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For Shops, Churches,
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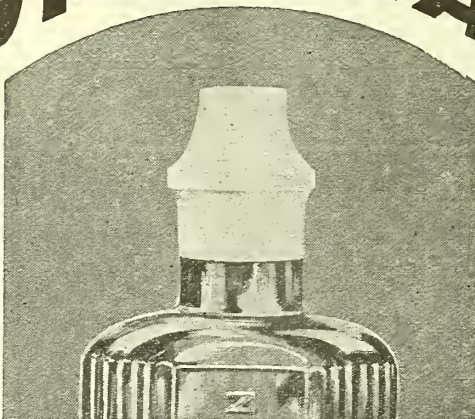
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New Window Display Conditions

Monthly Account.

Carriage Paid.

For a small Central Window Display of not less than 14 days and an order for £5 worth of Phosferine we allow a bonus of 10/6, on a £2 10 0 order 5/3.

This shows a net profit on the transaction to the Chemist of 35% besides attracting the passer-by to the window and considerably augmenting sales generally.

The above conditions apply only to the United Kingdom.

EXAMPLE.

		COST	SELLS FOR
3½ dozen 1/3 size at 12/- net	...	£2 2 0	£2 12 6
2 " 3/- " at 30/- "	...	3 0 0	3 12 0
		5 2 0	
Less 10/6 for Window Show	...	10 6	
		£4 11 6	£6 4 6

Showing a Net Profit of £1 13 0 on an outlay of £4 11 6.
Window Display Material Free and Carriage Paid.

WHOLESALE PRICES OF PHOSFERINE.

<u>Carriage Paid.</u>	<u>Monthly Account.</u>
1/3 size ...	12/- per doz. net.
3/- " ...	30/- " "
5/- " ...	48/- " "
12/- " ...	114/- " "

PROTECTED PRICES.

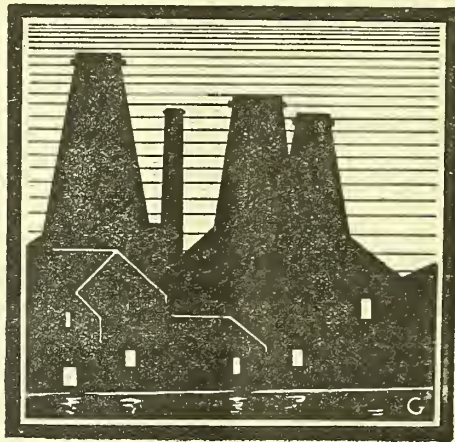
Phosferine and all of our Proprietary Medicines are supplied on the condition that they are not retailed in the United Kingdom under the following prices—viz., 1/3, 3/-, 5/-, and 12/-.

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PHOSFERINE (ASHTON & PARSONS) Ltd., Ludgate Hill, LONDON, E.C.4.

Telephone No: CITY 8733. Telegraphic Address: "PHOSFERINE, CENT, LONDON."

IMPORTANT.—Every care is used in corking and packing Phosferine, but occasionally a leaky bottle will pass undetected. Any leaky or faulty bottle should be returned to PHOSFERINE (Ashton & Parsons), Ltd., Ludgate Hill, London, E.C.4, when a fresh supply will be sent and postage refunded.



Pharmaceutical Glassware of all kinds

DISPENSING BOTTLES
CHEMISTS' SHOP BOTTLES
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SOXHLET BOTTLES. EYE-BATHS

Designers & Manufacturers of Glassware for Perfumes, Cosmetics and Bath Salts

SPRINKLER NECK BOTTLES
WHITE OPAL AND ROSE PINK
FROSTED GLASSWARE

Colours WHITE FLINT, MEDICAL TINT, PALE GREEN,
ACTINIC GREEN, AMBER, BLUE and ART COLOURS

All our Manufacture is of the Highest Quality

WOOD BROTHERS GLASS CO., LTD.

(ESTABLISHED 1828)

BARNSELY - - - ENGLAND

THE CHEMIST AND DRUGGIST

28 ESSEX ST.
LONDON, W.C.2

SUPPLEMENT

SEPTEMBER 27, 1930

This Supplement is inserted in every copy of The Chemist & Druggist.

THE SUPPLY OF SUPPLEMENTS

The clerical work in connection with the posting of spare copies of the Coloured Supplement week by week has increased to such an extent that we have been compelled to reorganise our system of distribution. Our readers will please note, therefore, that in future, instructions can be accepted for not more than six successive issues of the Supplement at a time, and that in every case the name and full postal address should be written on

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If wrappers bear a halfpenny stamp only, postal delivery is delayed.

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Messrs. Orridge & Co., 56 Ludgate Hill, E.C.

Telephone No.: CITY 2283.

May be consulted at their Offices on matters of Sale, Purchase and Valuation

1.—PENZE (Near) (Good Position).—General Retail and Dispensing Business, with Photographic; established about 1½ years; returns last year £1,750; gross profit 35 per cent.; returns increasing; double-fronted shop, well fitted and stocked; rent £125; lease has 19 years unexpired; price £1,150.

2.—EDGWARE (Near).—Middle-class General Retail and Dispensing Business, with Kodak Agency and N.H.I. (£30 per month); returns present rate £200 per month, increasing; double-fronted shop, well fitted in oak and amply stocked; stock and fixtures estimated to be worth £1,000; house sublet at £2 7s. 6d. weekly; price £1,500 or offer.

3.—SOUTH KENSINGTON, S.W.—Good middle-class Cash Retail Business, with Kodak Agency; established 60 years, returns £2,250 per annum; good profits; stock estimated to be worth £550; rent £150 per annum; lease has 20 years unexpired; living accommodation above, which could be sublet at £78 per annum; vendor is fairly anxious to sell and will accept first reasonable offer, either in lump sum or on a valuation basis; further details on application.

4.—HAMPSTEAD (Near).—Good-class Retail and Dispensing Business, with Kodak Agency and Medicated Wine Licence; established many years and in present hands ten years; returns last year exceeded £2,600; gross profit £934; double-fronted shop, well fitted and stocked; lease 25 years unexpired; ground rent £10 per annum; sublet £2 per week; price all at £3,000.

5.—LONDON, E.—Quick Cash Retail Business, with Kodak Agency; N.H.I. just started, increasing; returns, present rate, about £80 per week; accountant's figures; large double-fronted shop, well fitted and stocked; nice flat above; rent £180; lease has 18 years unexpired; price £2,850.

6.—CITY BUSINESS.—General Retail and Dispensing Business, with Kodak Agency; returns last year £3,256; accountant's figures; double-fronted shop, well fitted and stocked; rent £200 per annum; held on lease; price £2,600, or valuation terms entertained.

7.—CHELSEA.—General Retail and Dispensing Business, with Kodak Agency and N.H.I. Dispensing; returns, under management, £1,700 per annum; double-fronted corner shop, well fitted and stocked; stock estimated to be worth £500; rent £100 per annum; held on lease; in order to sell quickly a small sum for goodwill will be accepted, plus the value of stock and fixtures.

8.—SUSSEX COAST (Near).—General Retail and Dispensing Business; Kodak Agency; returns under management of a lady £1,450 per annum; stock and fixtures estimated to be worth £500; rent £80 per annum; held on lease; price £300, plus stock and fixtures at valuation.

9.—MANCHESTER.—Old-established Manufacturing Business for Sale; lines dealt in include Cachous, Benzene Healing Salve, etc., etc.; net profit last year £387; neglected; scope for large increase under energetic management; further details on application.

10.—HOME COUNTY.—Good-class Retail and Dispensing Business, with Kodak Agency; returns under management £2,300 per annum; double-fronted shop, well stocked; net rent £18 per annum; held on lease; entirely unopposed; price £1,500; valuation terms entertained.

11.—LINCS.—General Retail and Dispensing Business, with N.H.I.; returns £2,500 per annum, apart from N.H.I., which is fairly heavy; run under management; approximate value of stock £750; very fine position; long lease; price £1,650, or reasonable offer.

12.—SOUTH COAST.—General Retail and Dispensing Business, in good position; returns average £30 per week, increasing; main road shop, well fitted and stocked; estimated value of stock and fixtures £750; rent £110; sub-let £65; lease has 13 years unexpired; price £750 for immediate sale.

13.—SOUTHERN LINCOLNSHIRE.—General Retail and Dispensing Business, with Kodak Agency; established a century; returns approximately £2,600 per annum; net profit about £700; estimated value of stock and fixtures £1,200; large house with side entrance; lease 20 years unexpired; price £1,700, or offer.

14.—LIVERPOOL (Near).—Good-class Retail Business, with Branch, for disposal; private Dispensing and Kodak Agency; combined returns £3,200 per annum; Post Office attached to main shop; net profit £700; estimated value of stock and fixtures £1,500; very good living accommodation; held on leases at reasonable rentals; price all at £2,000, or near offer.

Messrs. O. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone Profit, the Value of Business, &c., can be determined. Involving as this does the labour of stocktaking and Valuation, it is often omitted and eventually becomes confusion and loss.

Valuations for Stocktaking

Messrs. O. & Co. are prepared to undertake these essential duties and make SPECIAL TERMS for such service.

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(One minute from St. Pancras and King's Cross Stations).

1.—NORTH-WEST COAST.—High-class Retail and Dispensing with Kodak Agency; returns £5,250; net profit £700; good modern house; well fitted and fully stocked; price £2,000, or near offer.

2.—SUFFOLK.—High-class Business, with Confectionery; no Dispensing or Photographic; returns exceed £2,400; stands to do easily £3,000; excellent shop, in main business street; good house with nice garden; owner retiring; price £2,000.

3.—MIDDLESEX (Outer Suburb).—High-class Family Retail and Dispensing Business, in fine position; returns last year £2,400; gross profits £1,000; audited books; good house; owner retiring; price £2,000, or offer; strongly recommended.

4.—HAMPSHIRE.—Good-class Business, in pleasant residential district; unopposed; easily worked; returns over £20 a week, increasing; modern shop and house; price £560, or offer.

5.—SUSSEX COAST.—Sound progressive Business in busy main road; central position; returns average over £30 weekly, increasing; living accommodation available; stock and fixtures worth £700; price £900, or first reasonable offer.

6.—ESSEX COAST.—Unopposed Drug Store, with Kodak Agency; returns £700; scope for increase; rent £24; good house and garden; stock worth £500; price £400.

7.—NORTH LONDON.—Good-class light Family Retail, with Optics; in most desirable residential suburb; returns £5,300; main road position; low rental; valuable lease; price £2,650 cash; recommended.

8.—LONDON, S.E.—Well-established Middle-class Cash Business, in main road position; returns £1,645; net profit £493; rent covered by sub-letting upper part; price £875; part can remain.

9.—WEST LONDON.—Old-established Drug Stores, same hands many years; retiring; returns over £700; net profit £211; low rent; house attached; price £350.

10.—LONDON (Essex Suburb).—Death vacancy; sound Cash Retail, with N.H.I.; returns £1,300; growing district; no immediate opposition; nice house; good saleable stock; price £650.

Estab. 1870.

Telephone: Terminus 3574.

The Association of Manfg. Chemists, Ltd.

Business Agency, Transfer & Valuation Department
Head Offices—Kimberley House, Holborn Viaduct, London,
E.C.1 (and at 2 Bixteth Street, Liverpool).

PARKIN S. BOOTH, Valuer.

Phone: City 1261-2-5

BUSINESSES FOR DISPOSAL.

1.—LONDON, S.W.—Old-established Chemist's Business, held on lease 8 years at £56 p.a.; let off £91 p.a.; returns average £217/20, under management; premises consist of double-fronted shop with two rooms behind; price for lease and goodwill, £150; fixtures, etc., £150; stock at valuation, approximately £350. Further particulars on application. (43)

2.—LONDON, N.7.—Old-established Optical Business, combining recently established Pharmacy, held on lease with 14 years to run at a rental of £250 p.a., of which £135 is let on lease; returns £28 per week; very large shop, dispensary and sight-testing room, situate in busy main road; no opposition for some distance. Further particulars on application. (42)

3.—MANCHESTER.—Old-established Retail Business for quick disposal; yearly tenancy; rent £150; returns for the last 40 years average over £50 weekly; at present returns are £35 weekly; nicely fitted and good stock; Wine and Spirit Licence; living accommodation. (48)

4.—BERKS.—Old-established Middle-class Retail and Dispensing Business for immediate disposal; returns £1,300; double fronted shop, well fitted in mahogany; rent £72 per annum; let off £104 per annum; excellent opening for Optics; vendor's private residence is available on lease; strongly recommended. (19)

5.—LONDON, S.W.—Recently-established Retail Dispensing Business premises on 15 years' lease at £150 per annum, of which part is sub-let at £104 per annum; returns 1929, £1,952, all cash; Kodak and U.C.A.L. Agencies; price for quick sale £1,100 all at, or £750, plus s.a.v. (approximately £425). (41)

6.—LINCS.—Established Dispensing and Retail Business for quick disposal in important town; 17½ years' lease to run at £200 per annum; returns average £50 per week; very large shop, situate in main thoroughfare; specially recommended.

7.—BIRMINGHAM.—General-Retail and Dispensing Business, situate in main busy road, for quick disposal; approximate returns £25 per week; double-fronted shop and seven-roomed house over; lease will be granted at £100 per annum; house above could be let at £78 per annum; price for lease, goodwill, fixtures and utensils £450; stock approximately £500. (49)

Ernest J. George

“TUDOR HOUSE,” WALSALL *Phone: 3774*

CHEMISTS' VALUER & TRANSFER AGENT
STOCKTAKING AND PRICING
INCOME TAX & RATING ASSESSMENTS, &c.

Correspondence is invited from prospective purchasers relative to the following businesses for sale:—

(1) HAMPSHIRE.—Good progressive business unopposed in most delightful and healthy part of the New Forest. Good class family trade. Business not long established, but owner must sell for health reasons. A modern labour-saving house is attached with good garden. The proposition would appeal to man or family to whom an ideal country life has an appeal. The total income, including property which recently cost over £2,500, is £4,000. The present turnover is extensive, and there is every prospect of increase. Good additional opportunity for Optics, Photographic and Hairdressing. Further particulars to bona-fide purchasers.

(2) PLYMOUTH.—Excellent situated; turnover £2,000; gross profits £700, net profits approx. £450 (after deductions in respect of wages have been made which would, of course, be saved as the result of personal management by the proprietor); wine licence; N.H.I. dispensing; the owner has also established a very considerable trade in connection with “Own Specialities” for which there is a big local demand; acquisition will also entail purchase of property, the value of which is estimated at £2,500, and the total capital sum required is approx. £4,500. Bona-fide applicants are invited to write for further particulars, and card of introduction to view the premises.

(3) HUDDERSFIELD.—Proprietor of two pharmacies (turnovers approx. £3,500 and £2,000 respectively), wishes to dispose for excellent private reasons; purchase price to cover goodwill, plus stock and fixtures at valuation; low rentals with long leases; undoubted opportunity; full details will be supplied to genuinely interested applicants.

(4) PORTSMOUTH.—Recently established lock-up shop with all modern requirements; good dispensing; optics; excellently situated in busy growing district; lease 20 years to

run at low rental; returns for first year exceed £1,000, but these, of course, are no criterion as to possibilities, and should be increased considerably during the current year; excellent reasons for disposing; purchase price required, approximately £1,100, including value of stock and fixtures.

(5) MIDDLESEX.—Drug Store; established 30 years; well situated; profits average approximately £215 per annum; lease to suit purchaser; living accommodation; opening for optics; splendid opportunity for qualified man to acquire and introduce N.H.I. and private dispensing; shop well fitted; value of stock and fixtures estimated at £300, and as he is desirous of selling quickly for private reasons, the owner will accept a total purchase figure of £450 or near offer.

(6) KENT.—Small town; established 40 years; turnover £1,150; net profits £285; 14-year lease; N.H.I. and private dispensing; D. & P. and Kodak agency; purchase price required £550, including stock and fixtures estimated at £400.

(7) LONDON, S.E.—Lock-up shop, established 7½ years; turnover £2,100; gross profits 36 per cent; lease 6½ years unexpired and renewable; inclusive rental, £110; photographic agency; no near opposition; an offer in the region of £1,350 (including stock and fittings, estimated at £750), would be favourably considered by the proprietor, who is retiring owing to ill health.

(8) COUNTRY BUSINESS (CHESHIRE).—Absolutely genuine; returns under unqualified management £500—£600 per annum; splendid opportunity for qualified man, as the shop is situated in close proximity to two doctors, and the nearest opposition is approximately one mile distant; good living accommodation; total purchase price approx. £650, of which £250 may be left on mortgage if desired, and including value of property assessed at £465.

London enquiries *re* businesses, stocktaking, etc., may be addressed to—

Mr. S. F. CLARK, 34 Marksbury Avenue, Richmond, Surrey. Telephone: Richmond 2210

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When Buying A Business or Partnership Consult Us



We are not Transfer Agents, but we arrange **GUARANTEED LOANS** with the **LEADING BANKS** for qualified Chemists who require Capital.

The Banks charge 1% over Bank Rate (minimum 5%).

Repayment of Loans can be spread over 5, 6, or 7 years. (Note: Income Tax Abatement may be obtained on the Interest paid, thus bringing the present Net Interest Rate down to 4% per annum approx.)

NO PERSONAL SURETIES or **GUARANTORS** are required. We arrange the necessary guarantees by insurance with a **FIRST CLASS INSURANCE COMPANY** for whom we act as **SOLE AGENTS** for this business.

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46 VICTORIA ST., MANCHESTER

Telephone: Established over 70 years. "Tomtom." Manchstr.
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SPECIAL OFFER

CENTRAL MIDLANDS.—The proprietor of three established Retail Pharmacies, very prominently situated in busy shopping areas, is anxious to dispose for private reasons; although high, the rents are not inconsistent with the value of the respective positions, and the annual turnovers at present, amounting to approximately £3,000, £2,500 and £1,500 respectively, could undoubtedly be substantially increased as the result of acquisition by a keen, energetic and ambitious purchaser or purchasers; for a pharmacist possessing personality and initiative there should be excellent scope whereby an important Retail and Family Dispensing Business could be firmly established; the businesses may be acquired either jointly or separately, and the respective capital amounts required are considerably less than the market value of the concerns; the present owner's sole reason for wishing to dispose is owing to his inability through outside interests to devote sufficient time to the businesses commensurate with their requirements and possibilities; the opportunities are exceptional, and bona-fide purchasers will be afforded every facility for inspection and investigation. Interested parties are invited to write immediately for full particulars. 176/275, Office of this Paper.

JOHN BRIERLEY, F.N.A.A.

CHEMISTS' VALUER and TRANSFER AGENT
135 Queen Street, Newton Heath, MANCHESTER

BOLTON (near).—Returns £1,500 p.a., house, £1,050. BLACK-POOL.—Returns £2,000 p.a., house, £950. Several drug stores at valuation, MANCHESTER, HIGH PEAK and BOLTON (near)—£300/£500 required.

"Valuations by fully-qualified staff." (Tel: Failsworth 113.)

MANUFACTURER OF CHEAP

ROLL FILM BOX CAMERAS

wishes to **DISPOSE OF ESTABLISHED BUSINESS**

as a going concern. Has been supplying large Stores and Gift Scheme distributors. Guaranteed an exceptionally profitable Business. Plant and Stock about £1,700. Box 176/266, Office of this Paper.

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Removed from Forest Gate for convenience of Sale.
5 LITTLE BRITAIN (close to G.P.O.),
LONDON, E.C.

Well-made CHEMISTS' FITTINGS, including handsome Dispensing Screen, two 10-ft. Drug Runs, six Chemists' Wall Showcases, four Chemists' Counters with showcase fronts, several bent front Counter Cases, Sponge Showcases, Perfumery Case and Desk, Silent Salesmen, Junior Salesmen, Mirrors, Tills, Display Stands, Glass Shelves, Office Furniture, two Milner's Safes, Typewriters, etc.

B. NORMAN & SON

will Sell by Auction, at their Sale Rooms as above, on Wednesday, October 8, at One o'clock.
Catalogues on application.

APARTMENTS.

BED-BREAKFAST.—Private house for Commercially representing Wholesale Druggists and Druggists' Sundries Houses; tram pass door. Winskip, 7 North Terrace, Newcastle-on-Tyne.

BUSINESSES FOR DISPOSAL.

BIRMINGHAM.—For Sale, urgent, old-established neglected Chemist's Business, capable under personal supervision of big figures; owner interested elsewhere; absolute bargain for pharmacist willing to take over immediately; well stocked and fitted; good position and large house over shop, with private entrance. 239/9, Office of this Paper.

BOLTON (Near).—Retiring from business; old-established Chemist's concern; returns past three years approximately £30 weekly; vendor's own property; sell or lease at reasonable rental; good living accommodation; splendid position; scope for live man; price £1,050; no triffers, please. Brierley, Chemist's Valuer, 135 Queen Street, Newton Heath, Manchester. Tel.: Fallsworth 113.

BRIGHTON.—High-class Retail and Dispensing; modern shop; long lease; living accommodation; takings £1,500 per annum, increasing; average net profit about £450 per annum; stock and fixtures valued approximately £700; price £850 all at for quick sale. Preston & Partners, Valuers, 29 Ludgate Hill, E.C.

BUCKS.—Very profitable Pharmacy in main thoroughfare of important industrial town; large double-fronted shop and house of seven rooms; held on long, favourable lease; substantial turnover; price £1,200, part of which could remain; or Partnership entertained. Apply, giving banker's reference, 242/36, Office of this Paper.

GLOUCESTERSHIRE.—Sound, progressive Dispensing and Photographic Business; Kodak Agency; all cash trade; turnover £1,560, increasing; net profit 50 per cent.; bright, well-fitted shop; good living accommodation; favourable lease. No triffers, please. 241/35, Office of this Paper.

LONDON, S.W.—Light Retail, Dispensing and Photographic, with scope for Optics; old established; returns £1,500; net profit £400; good shop and house on 21 years' lease; house could be sub-let at £78 per annum; stock and fixtures valued at £750; price £1,150. 241/15, Office of this Paper.

LONDON, WEST-END.—For disposal, a first-class Pharmacy, recently established and doing over £2,800 per annum under management; well fitted and close to several high-class hotels, tube and theatres. Apply BM/BVMW, London, W.C.1.

LONDON, S.E.—Recently established Chemist's Business; lease 18 years to run at £90; present average returns: Counter £50 per week, Panel £25 per month; double-fronted shop and six rooms; stock £360; sound reasons for selling; price all at £850, or offer; all records available; fullest investigation invited. 243/28, Office of this Paper.

LONDON, S.W.—Chemist's Business for Sale; double-fronted, lock-up shop; main road position; thickly populated district; returns £17 to £20 per week, neglected; held on lease; price £450, or near offer, including stock over £250; genuine reason for sale. 243/36, Office of this Paper.

NORTH LONDON SUBURB (Good Locality).—Dispensing and Optical; long lease; low rent; upper part now let off; possession could be arranged; takings well over £3,000 per annum at excellent profits; old-established; stock and fixtures valued approximately £1,400; price, all at £2,750, or near. Preston & Partners, Valuers, 29 Ludgate Hill.

NORTH-EAST COAST.—Good-class Pharmacy for Sale; Kodak and Optical; excellent Photographic business; not much N.H.I.; returns average £1,000; genuine reasons for selling; long lease can be arranged, or property can be bought; price, stock, fittings and goodwill, £675; house above. Apply 241/27, Office of this Paper.

NORTH-WEST LONDON SUBURB.—General Retail and Dispensing, in good working-class neighbourhood; double-fronted shop; long lease, with house let off; possession can be obtained; average takings £2,500 per annum; capable of increase; Kodak Agency, N.H.I.; stock and fixtures valued approximately £1,000; price £1,500 all at, or near. Preston & Partners, Valuers, 29 Ludgate Hill, E.C.

PORTSMOUTH.—Recently established Pharmacy for Sale; well fitted; large and spacious shop; room for Optics, which should do well; present takings over £1,000 per annum, under management; good living accommodation, with separate entrance, over shop, and let at £65 per annum; rent £90 per annum; long lease. Apply BM/BVMW, London W.C.1.

SOUTH DEVON (close sea, in new district).—Unopposed Business for disposal; returns £1,120, increasing; large shop, 6 rooms, bathroom; large garage; rent £120 per annum; long lease; low rates; price for business and fixtures £500; stock about £280. Write 242/17, Office of this Paper.

SOUTH DEVON.—General Retail and Dispensing Business for disposal, producing an average net profit of £400 per annum; through reasons of ill-health vendor is anxious for an early transfer and willing to accept a reasonable offer. 244/16, Office of this Paper.

SOUTH MANCHESTER SUBURB.—High-class Business; easily worked with one assistant; turnover £2,400, £2,500, £2,550; still increasing despite industrial slump; Optics growing; owner adopting optical business; property, on lease, cannot be sold; good living accommodation; rates and rent £75; profits good; £1,800; this is an honest offer; accountant's figures to genuine buyer. 240/6, Office of this Paper.

SOUTH WALES.—Old-established Business; General Retail, Dispensing, Medicated Wine and Kodak Agency; small N.H.I.; returns over £2,000; held on lease; rent £70; health reasons for disposal; would suit company; good opening for Optics; price £200 and stock and fixtures valuation, total £1,000-£1,200; no triffers. "Cymro," 241/20, Office of this Paper.

STRATFORD, E.15 (Main Road).—Genuine, long-established Business; thickly populated; lease 21 years; rent 25s.; rates 4s.; present takings £30 week; travelling abroad; Kodak; lease and goodwill, stock, fixtures and fittings, £700 (worth £900); bargain; first close offer accepted; references. Write to "Chemist," 19 St. Mark's Road, London, E.8.

TEES-SIDE.—Retail and Dispensing Business, established over 20 years, in populous suburb; Kodak Agency; turnover £1,200; net profit £328; modern fronted shop; well fitted and stocked; annual rates £20; premises comprise shop, cellar, two rooms, kitchen, yard, etc., downstairs, three rooms and bathroom upstairs; existing mortgage £700; price for quick sale, property £850, business £950; good reasons for disposal. 244/20, Office of this Paper.

DRUG Store for Sale on main road; lock-up shop; ground room for house; stock £100 and fixtures; average takings £800 per year, average the last 3 years; price £450. 241/2, Office of this Paper.

DRUG Stores for Sale, Western Suburb; good position; takings £22-£25 week; splendid profits; could be considerably increased by qualified man; any trial; illness cause of sale; will accept best reasonable offer; long lease; long garden; four rooms, scullery, bath. 244/5, Office of this Paper.

£200 ALL AT.—Branch Business on main road in residential part of Midland town; Kodak Agency, Light Retail, etc., N.H.I.; takings average £66 per month; good stock and well fitted; rent £45 per annum; lease eight years to run; good house; gas, electric, w.c., bath (h. & c.), etc. 243/8, Office of this Paper.

£450, ALL AT!—Drug Store, lock-up, S.E. London; rent £68; sublet £91; lease 14 years; takings £20; splendid opportunity for M.P.S.; Kodak Agency, etc.; stock £200; growing neighbourhood; genuine offer. 243/24, Office of this Paper.

BUSINESSES WANTED.

MIDLANDS.—Sound Business wanted within 30 miles of Birmingham with turnover of not less than £2,000; larger turnover for preference. Please give full particulars as to position, type of business, lease, and also net and gross profits for last 3 years if possible; purchase of property entertained if necessary. 241/32, Office of this Paper.

ANY Business in or near London, returning £35 per week upwards; with or without living accommodation; cash buyers waiting. Apply, Orridge & Co., 56 Ludgate Hill, London, E.C.4. Telephone: City 2283.

BERDOE & FISH are in immediate want of sound concerns in all parts, and invite correspondence from intending vendors. Cash buyers waiting, and quick sales negotiated without any publicity. Private register kept. Transfer Offices, 41 Argyle Square, King's Cross, W.C.1.

REQUIRED, a small Business (not in the North or Wales or London). Apply to G. Godding, Chemist, Market Deeping, near Peterborough.

SMALL Chemist Business; East Midlands preferred; or premises in place where a Chemist is required; town or village. 241/21, Office of this Paper.

WANTED, immediately, genuine small Pharmacy; living accommodation; Southern England preferred, not Bournemouth. Full details (in confidence) to "Pharmacist," 16 Richmondwood Road, Bournemouth.

WANTED, immediately, Retail and Dispensing Business, London suburbs, with reasonable living accommodation; all communications treated absolutely confidential, and advertiser will at once view anything suitable; cash waiting. "P. H.," P.C.B. 85/13, Office of this Paper.

YOUNG Chemist requires old-established London Business with convenient house attached; will consider purchase of freehold property; yearly turnover at least £1,250; cash available; no agents. Principal particulars (in strict confidence) to Maynard, 119 Winston Road, London, N.16.

AGENCIES.

AGENT wanted, calling on Chemists and Hairdressers, to carry free selling line, on commission, for established house; Retail only. 241/38, Office of this Paper.

R. S. CARRIE, Chemist, having sold his business at The Brook, Liverpool, would be pleased to hear from any firm desirous of establishing an Agency in Liverpool. Address "Stonehenge," Druids Cross Road, Wavertree, Liverpool.

PREMISES TO LET.

PICCADILLY CIRCUS (off).
Opposite Regent Palace Hotel,
IDEAL BUSINESS PREMISES.

5/6 Sherwood Street.—Shop and hasement, 1,400 sq. ft.

18 Denman Street.—Shop, first floor and basement, 2,450 sq. ft. Long lease; moderate rents.

All these properties, being inter-communicating, can be let together. These premises are strongly recommended.

Apply "J. K.," 5/6 Sherwood Street, London, W.1.

HARROGATE.—Attractive modern Shop, situate in a premier position affording unprecedented opportunity for Chemist, where there is no immediate opposition; very imposing frontage; good window display; central heating; store room at rear; to be let on lease at reasonable rental. Apply Morphet & Morphet, Estate Agents, 4 Albert Street, Harrogate.

RUSSELL SQUARE (near).—Attractive Shop, with living accommodation over; rent £180 per annum; 12 years' lease for sale at a nominal figure. Apply Hillier, Parker, May & Rowden, 27 Maddox Street, London, W.1.

SHOP to Let (last of five), with living accommodation, situated on main road; corner site; increasing neighbourhood; splendid opportunity for right man; 17 miles north of London. Apply P.C.B. 83/9, Office of this Paper.

SOUTHAMPTON ROW (just off).—Attractive and well-fitted Shop and Basement; frontage about 10 ft.; rent £100, rising £120 per annum; nominal price for 14 years' lease. Apply Hillier, Parker, May & Rowden, 27 Maddox Street, London, W.1.

TO be Let or Sold, freehold, commodious Business Premises, with living accommodation, in the best part of High Street, Woburn Sands; very healthy and growing neighbourhood; a good opening for a qualified Chemist; experience of the wireless trade would be an advantage. Apply F. P. Chapman, High Street, Woburn Sands.

PARTNERSHIPS.

WANTED at once, a young, gentlemanly Chemist to take an active Partnership in a small, substantial business in a S.W. London suburb; capital required £300 or £500; this is a splendid opportunity for a keen and active business man. 243/12, Office of this Paper.

SITUATIONS OPEN.

RETAIL (HOME).

HAMPSHIRE.—Lady Assistant required; competent Dispenser, some knowledge of Photographics (not D. & P.). J. W. Martin, Pharmacist, Brockenhurst, New Forest, Hampshire.

HUDDESFIELD INDUSTRIAL SOCIETY, LTD.—Wanted, young, qualified Assistant. Give full particulars first letter. Copies only of testimonials if sent. Apply Secretary (endorsed Chemist), Industrial Society, Ltd., Bxton Road, Huddersfield.

KENT.—Qualified Manager for busy industrial business within 20 miles of London; previously controlled staff of big business; keen Salesman and good display man essential; good house attached; liberal salary and commission. State when free, age, and previous experience. 240/391, Office of this Paper.

KENT (About 31 miles from London).—Qualified Manager for small Company; outdoors; £4 weekly to commence. Apply 244/28, Office of this Paper.

LIVERPOOL (near).—Qualified Manager, about 30, married (house provided), required shortly; used to Retail and Photographic business. Applicants please give particulars of experience and salary required; first-class references essential. Apply 242/18, Office of this Paper.

LONDON, W.—Lady Assistant required for high-class business; must be smart in appearance, quick and accurate Dispenser for Family trade. State when at liberty, age and previous experience to 240/390, Office of this Paper.

LONDON, S.W.—Smart Assistant (male or female), used to modern Family business, for Dispensing and Counter. State when free and full particulars as to age, experience, etc., to 240/392, Office of this Paper.

LONDON, S.E.—Assistant (male) wanted for Counter; middle-class business; must be smart and good Salesman. Apply, stating age, height, experience, and salary required, stating positions held during last 3 years. 241/25, Office of this Paper.

LONDON, N.E.—Junior or Improver; just out of apprenticeship; outdoor. Apply by letter, sending particulars with salary required, Tabor & Cresswell, 138 High Street, Kingsland, E.8.

LONDON, S.E.—Wanted, young lady Assistant, with good N.H.I. and Counter experience; must be energetic and reliable. Apply 244/8, Office of this Paper.

LONDON, N.—Smart Assistant, unqualified male, wanted for good-class Dispensing and Photographic business. Full particulars, with photo and salary required, 235/33, Office of this Paper.

MIDLANDS (near Birmingham).—Junior Assistant for Counter and N.H.I. Dispensing; quick and reliable Dispenser essential. Kindly state when disengaged, experience, salary, etc., and give references in first letter; photo if possible. Applications not answered in 4 days declined. 241/39, Office of this Paper.

SOUTH CROYDON.—Wanted, young, qualified Assistant (male); single; outdoors. Apply, with full particulars, stating salary required, enclose photo if possible, S. A. Noble, Selsdon Road, South Croydon.

STAFFORDSHIRE.—Qualified Manager for industrial business in busy manufacturing town; must be keen and progressive; good Window-dresser and Salesman essential; house attached; excellent prospects for ambitious man to make progress. Give full particulars, age, salary, and when free to 240/39, Office of this Paper.

S.W.16 (LONDON).—Young Junior Assistant or good Improver for good-class Dispensing and Toilet business. Applicants not answered in four days declined. Apply, stating age, experience, references, and salary required, 240/36, Office of this Paper.

A HIGH-CLASS Perfumery Assistant required; only those with the highest qualifications considered. Apply, by letter, to Rohert Douglas (Bond Street), Ltd., 21 New Bond Street, W.1.

ASSISTANT wanted; unqualified; male; age 25-30. Usual particulars to C. Dickinson, 119 South End, Croydon.

ASSISTANT.—Young man, unqualified, wanted; age 22-25; Dispensing and Counter; good references essential. Apply James H. Wilson, Ltd., The Broadway, Crouch End, N.8.

FIRST-CLASS Assistant, with good Optical knowledge and experience, required; Pharmaceutical qualification not necessary; must be active, reliable, and have undeniable references; permanency. Send photograph, age, references, salary required, married or single, to Body's, Broadway, Southend.

IMMEDIATELY.—Junior Assistant in a Family Retail and Dispensing Business; able to assist with Dispensing, Counter and Window-dressing; must have served a regular apprenticeship. Full particulars as to experience, references and salary required in first letter, Atkin, 243 West End Lane, Hampstead.

IMPROVER (lady), just out of apprenticeship preferred, for high-class pharmacy. Apply, enclosing full particulars, salary, reference, to Grange Park Pharmacy, Grange Park, N.21.

JUNIOR Assistant (male) wanted; good Dispenser and Counter experience. Give full particulars age, salary required. 281 Wood Lane, Five Elms, Becontree, Chadwell Heath, Essex.

LADY, qualified preferred, wanted, as Assistant Dispenser, for N.H.I. Dispensing only; must have had best experience; short hours; outdoors. Apply, with photo and full particulars, stating salary required, to Ralph Cuthbert, Ltd., Chemists, Westgate, Huddersfield.

LADY Assistant for good-class business; Dispensing and Counter experience. State age, height, experience, references and salary required, enclose photo, to be returned. Dyson, Chemist, 360 Upper Richmond Road, East Sheen, S.W.14.

LADY, qualified, wanted for small business; one wishing to gain experience would suit. State age and usual particulars to Manager, 241 London Road, Westcliff-on-Sea.

LADY Assistant, qualified, in October, for Surrey, ten miles London; experienced in N.H.I. and Counter work; new business starting; Panel; low salary to start; live in; good home. Apply, stating age, salary, experience, references, to 243/26, Office of this Paper.

MANAGER (qualified Chemist and Optician) wanted for working-class district in North London; salary £300 per annum, or an arrangement for salary and commission. Write full particulars to 242/27, Office of this Paper.

QUALIFIED Assistant; male; must be quick and accurate Dispenser, good Counterman and Window-dresser; age about 22. Apply by letter to Mr. Foster, 187 Banstead Road, Carshalton, stating experience, salary required, and when disengaged.

SMART, young, qualified Assistant required for medium-class Family business in S.W. district. Apply, giving full particulars and salary, to "Barry," 242/28, Office of this Paper.

TAYLORS CASH CHEMISTS require two Unqualified Juniors for London district; London experience preferred. Apply (by letter only) to 8 Guilford Street, W.C.1, giving full details of experience, height, age and wage required.

TIMOTHY WHITES are about to open more new branches, and require really capable, qualified Managers with previous experience of management; applicants must be energetic and have good organising ability; good salaries; commission; free removal. Send full particulars to Assistant Secretary, Timothy Whites (1928), Ltd., Chemists, Portsmouth.

UNQUALIFIED Assistant wanted; under 30 preferred; must be an accurate Dispenser and accustomed to quick Counter trade. Apply, stating age, experience, salary required, to Head Office, Wm. Fox & Sons, Ltd., 109, 111, 113 Bethnal Green Road, London, E.2. (10 minutes from Liverpool Street.)

WANTED, an unqualified Assistant in the Pharmacy Department; must be capable of Dispensing and Window-dressing. Applications must be sent before Thursday next, October 2, accompanied by copies of two testimonials, to Secretary, Slaitwaite and District Co-operative Society, Ltd., Slaitwaite, Huddersfield.

WANTED, Locum (lady) for fortnight from October 2 in Retail Pharmacy on South Coast; season over, work very light. Apply, stating age, salary (outdoors), and give full particulars of experience, to Miss Cutfield, M.P.S., 7 The Parade, Angmering-on-Sea, Sussex.

WANTED, at once, a Junior Assistant for high-class Dispensing and Counter business at Hove, Sussex. State age, height, and full particulars of experience and salary required. Write to H. G. Mumford, "Woodlands," Linden Road, London, N.15.

WANTED immediately, Junior or Improver (one having passed Part I preferred), for light Family and Dispensing business in healthy North London suburb. Walkers, Chemists and Opticians, The Promenade, Palmers Green, N.13.

YOUNG qualified Assistant (lady or gentleman) for good-class Retail and Dispensing wanted at once; also Stock- and Storekeeper. Full particulars, including wage required, in both cases to Bone, Chislehurst.

YOUNG, qualified Manager required for N.W.3 district branch shop; must be ambitious and a good worker; good commission. State experience, etc. P.C.B. 85/17, Office of this Paper.

WHOLESALE.

CHEMISTS' TOILET SUNDRIES.—Stock-keeper required for Wholesale Warehouse; only those with experience in the handling of toilet goods need apply; permanency and good prospects. State (in confidence) age, full particulars of former engagements, and wages desired. Secretary, Timothy Whites (1928), Ltd., Portsmouth.

EXPERIENCED Invoice Clerks, accustomed to Drug and Patent Medicine trade. State age, experience, salary required, etc., to 176/283, Office of this Paper.

FIRST-CLASS Representatives, with connection best Chemists principal towns, required by specialty firm with well-advertised unique product; good commission basis only. Write fully, stating lines carried, to Pyrorhosol, Ltd., 165/7 Waterloo Road, S.E.1.

LEADING firm of London Wholesale Druggists have a vacancy on their travelling staff for a Representative in London and suburbs; good position for first-class experienced man. Apply "R.," 176/286, Office of this Paper.

MANUFACTURERS of high-grade Toilet Specialities, including the finest selling and repeating line known to the trade (sales now exceed 50,000 per month), require first-class, experienced Representative to take over and develop their connection over the best part of Scotland; applicants must be well known to the trade, especially Gentlemen's Hairdressers, and have undeniable sales records; own car an advantage. Full particulars to 176/284, Office of this Paper.

OPPORTUNITY for Chemist or Outdoor Representative with old-established Wholesale and Manufacturing Chemists in Scotland; Patents, Packed Goods and Drugs; progressive business, expanding rapidly; good position for efficient man; salary and interest; capital required £1,000. Address, "Chemist," 6 Linn Terrace, Muircnd, Glasgow.

PART-TIME Representatives or Agents, who are already calling upon Institutions, wanted by a well-established house, in (1) London, (2) South Wales, (3) South-Western Counties, (4) South-Eastern Counties, to assist develop the sales of well-known specialities which already command a considerable sale. Full particulars to 176/285, Office of this Paper.

REPRESENTATIVE, one accustomed to calling on Doctors, R. wanted by London Druggists; one with country connection required. Apply "Traveller," 175/286, Office of this Paper.

REQUIRED, the services of gentlemen in various districts to push a well-known production; only those who already have a well-established connection among Retail Chemists need apply; the work will not conflict with present representation; state exact territory covered and frequency of calls. Box 1271, S. Davis & Co. (Aldwych), Ltd., Aldwych House, London, W.C.2.

THE KRASKA CO., LTD., 65 Portobello Road, W.11, have a vacancy for gentleman with manufacturing experience to divide time between assisting in indoor routine and calling on Chemists, Hairdressers, Stores, etc.; smart Salesman with genuine and smart connection essential.

THERE is a vacancy for an energetic Representative, with a good connection amongst Doctors and Chemists, to travel in Great Britain for an old-established British house; applicants should not exceed 35 years of age, and must give full particulars of their experience (which will be treated in confidence), at the same time stating salary required. 243/1, Office of this Paper.

(COLONIAL, INDIAN AND FOREIGN.)

BRITISH DOMINION.—Experienced Chemist required for 3 years' engagement in a British Dominion; age not over 35 years; must be capable of Manufacturing Essences, etc., for Aerated Water and Cordial Trades and also competent to undertake Analytical and Research work. Applicants should write, stating age, qualifications, experience, with copies of testimonials, to "Dominion," 176/282, Office of this Paper.

GOLD COAST.—Dispenser and qualified male Nurse required for Mine in the Gold Coast Colony; man not over 40, with R.A.M.C. Service or equivalent training essential; remuneration £40 per month; 9 months' tours on Coast, followed by 3 months' leave on half-pay; second class passages out and home allowed. Write, stating age and with full particulars of experience and copies of testimonials, to "E. C.," c/o Vickers, 24 Austin Friars, E.C.2.

SITUATIONS WANTED.

RETAIL (HOME).

A.A.A.A.—A qualified lady desires position in Hospital good all-round experience; quick and accurate Dispenser. 240/32, Office of this Paper.

A.A.A.—M.P.S., 25 years of age, 8 years' experience as Dispenser, Locum or Manager; latter preferred; excellent references; registered R.P.U. "Atropa," 52 Maryon Road, Charlton, S.E.7.

A.A.A.—QUALIFIED; 28; twelve years' all-round experience; five years manager; Salesman, Buyer, Displays, Books; control staff; disengaged; London only. 9 St Michael's Road, Cricklewood, N.W.2.

A.A.—JUNIOR; 4½ years' excellent experience, Dispensing, Counter, and Photographic; S.E. London preferred. Colyer, 7 Hawthorne Grove, S.E.20.

A.—QUALIFIED Pharmacist, 26, tall, home after 2 years in high-class English Pharmacies on the Riviera, seeks position; part time until November preferred while studying optics; highest references; previously 2 years with Rouse & Co., Wigmore Street, W.1; fluent French. Write F. M. Mellows, 52 Priory Road, N.W.6.

A.—RECENTLY qualified, age 22, desires post as Assistant; disengaged; sound credentials. Powell, 37 King Richard Street, Coventry.

A CAPABLE Qualified Assistant, 22, requires post; London South or Midlands preferred; good experience of high- and middle-class businesses; "Square" trained; disengaged. Baker, 1 Victoria Gardens, Northampton.

A COMPETENT Unqualified Assistant or Manager, 22 years' all-round experience, 10 years managing, age 35, abstainer, Salesman, courteous, Window-dresser, Dispensing, Prescriber, Photography, desires position with unfurnished accommodation if possible, not essential; permanency; excellent references; London or suburbs only; interview; free October 13. Stokes, 487 High Road, Tottenham, N.17.

A LADY Dispenser (Hall qualification), with excellent all-round experience and undeniable references, desires part-time post; London Clinic or Chemist preferred; free now. Little, 45 Nimrod Road, S.W.16.

A LONG-EXPERIENCED woman Dispenser wants post, with living accommodation; Dispensary or lock-up Surgery; London or 60 miles radius; small salary. "Beta," 5 Cromwell Avenue, Cheshunt, Herts.

A QUALIFIED lady; reliable; experienced Dispenser; able to take charge; October 1. Miss Lurie, 8 Lancaster Road, N.W.3.

A QUALIFIED Chemist, recently disposed own business, 40, tall, good general London and country experience, seeks position, view to early succession in business of £25-40 turnover, or Partnership in larger concern, preferably living accommodation and 40-50 miles London, or on Sussex Coast. Walton, 64 Hoylake Crescent, Ickenham, Middlesex.

A QUALIFIED Manager, 28, married, excellent all-round experience, desires permanency; sound references; capable and ambitious; London or near. "Chemist" 65 Leyborne Avenue, Ealing, W.13.

A THOROUGHLY competent, qualified Manager, with wide experience; age 45; height 6 ft.; good appearance and address; free October 18. "Pharmacist," 75 Oxford Street, Manchester.

ADVERTISER, gentleman, desires' return Liverpool; total abstainer; not afraid of work; 8 years' previous experience with one Liverpool firm; unqualified; excellent references; free one month from engagement date. 244/2, Office of this Paper.

AGE 26, qualified 5 years, abstainer, good references, desires post where Optical experience obtainable; part-time post in London considered. "J. C. W.," 91 Regent Street, Kingswood, Bristol.

APPOINTMENT required as Manager; qualified; married; 34; energetic; conscientious; 18 years' experience; seven years branch manager; Optics and Photo; living accommodation preferable. "Rudiobus," 4 Richmond Gardens, Highfield, Southampton.

A N experienced Pharmacist seeks post; locum or permanency; free October 8. "Pharmacist," 29 Sunnyside Road, Ealing, W.

A LERT Assistant, 23 (at present referred one subject Part II), requires position as Locum or permanent London (outdoors); experience, good; references excellent. "H. H. G.," 52 Dynham Road, N.W.6.

A PPRENTICE, second year, City experience, seeks situation locally; Whyteleaf, Caterham, Purley district. Write May, 1, Inglis Road, Addiscombe.

A S Manager or part time; London or Surrey; M.P.S., F.S.M.C., J.C.Q.O.; 38; single; well recommended; free November. 240/35, Office of this Paper.

A S Locum or Assistant; disengaged; good references; abstainer; experienced; used to management. "H. G.," 142 Hill Lane, Southampton.

A S Locum; all-round experience; references to date; moderate terms; disengaged. "reliable," 72 Roseneath Road, Urmoston, Manchester.

A S Manager of middle-class Family business; London or suburbs; thoroughly experienced in all branches; highest references. 243/40, Office of this Paper.

A SSISTANT; 21; disengaged; used to heavy Dispensing, Windows, Counter. "Script," 28 Clegg Street, Brierfield, Burnley, Lancashire.

A SSISTANT; unqualified; single; town or country; 25 years' good all-round experience. "Chemicus," 3 Highclere House, Knaphill, Woking.

A SSISTANT, 21, unqualified, desires permanent situation in or near London; excellent experience in all branches; height 5 ft. 10 in. 243/23, Office of this Paper.

B IRMINGHAM OR MIDLANDS.—Qualified; 23; Manager or Assistant; first-class experience; keen; capable; good references; disengaged October 18. 241/37, Office of this Paper.

C HEMIST, M.P.S., with sound training and exceptional experience and thorough knowledge of the trade, seeks managerial position of good-class Pharmacy; hard working, painstaking, courteous and obliging; at liberty. 244/4, Office of this Paper.

D ISENGAGED; Assistant; 38; 20 years' first-class Dispensing and Counter experience; Window-dresser and Photography; well recommended; energetic; capable of taking charge; excellent references; 70s. weekly (outdoors). "J. S.," Crown Hotel, Audlem, Cheshire.

D ISENGAGED October 6; qualified; experienced; all-round; Locum (or permanency London district); good Dispenser; recent references. "M.P.S.," c/o Messrs. Michell's Pharmacy, St. Austell, Cornwall. London address, 60 High Street, Stoke Newington, N.16.

D ISPENSER (Hall), doctor's daughter, good experience, requires post; W. or S.W. district preferred; moderate salary. 241/23, Office of this Paper.

E NERGETIC Qualified Manager, 30, with comprehensive London and provincial experience, requires progressive permanency, London and district; smart appearance; good Dispenser; extensive Photographic knowledge; modern ideas Window-dressing and Displays; good-class Family and Dispensing business preferred; excellent references; free immediately; would accept locum. Chapman, 31 Richmond Avenue, Hillingdon, Middlesex, or 'phone Park 3507.

F.S.M.C. (J.C.Q.O.), expert Refractionist, desires progressive post with Chemist-Optician; 10 years' all-round Pharmaceutical experience; accurate Dispenser; strongly recommended by present employer. C. H. Green, 75 Woodbridge Road, Guildford.

F.S.M.C., F.B.O.A., F.N.A.O., Registered J.C.Q.O., hard and conscientious worker, good Pharmaceutical experience and Retail (unqualified), desires position with Chemist or Chemist-Opticians; active interest or succession later preferred, not essential; prepared to furnish with first-class consulting room apparatus if necessary. Rowsell, 11 Wulfstan Street, Shepherd's Bush, W.12.

J UNIOR, 22, unqualified, seeks position near London; Dispensing, Counter; some Window-dressing experience; knowledge Photography; free November 3. 243/16, Office of this Paper.

L ADY Dispenser (Hall) requires Locum; free after October 6; experienced. Miss Sichel, Free Eye Hospital, Southampton.

L ADY Dispenser (Hall Certificate), age 24, very anxious to obtain post in Colchester, Clacton or Frinton with Chemist, Doctor or Institution; 2½ years' Dispensing experience. 241/18, Office of this Paper.

L ADY Dispenser-Book-keeper (Hall), age 22, requires post with Doctor in London; 2½ years' experience; free now. 241/1, Office of this Paper.

L ADY Dispenser-Book-keeper, qualified, Secretarial knowledge British, requires post. A. Warren, c/o 65 Richmond Road, Bayswater, W.8.

L IVERPOOL School of Pharmacy Student (Part II), male, 26, available 6 p.m.-8 p.m. daily or on Saturday afternoon and evening for Dispensing or any work; 8 years' experience; well educated; terms negotiable. Neville Lustgarten, Elwy Street, Rhyd.

L OCUM, Relief, Manager; "not registered"; over 20 years' sound experience, Dispensing, heavy Panel, Hospitals; City, West-End Stores and good Private; Counter, Stock, Salesman, Prescribing. "G.," 130 Scott-Ellis Gardens, N.W.8.

L OCUM or permanent; qualified retired Chemist; middle-aged; Retail and Hospital experience; excellent references. "Chemist," Flat 2, 6 Colville Mansions, Powis Terrace, Bayswater, W.

L OCUM; competent; experienced; highest references; disengaged September 28; town or country. "Locum," 56 Rudloe Road, Balham, S.W.12.

L OCUM; qualified; middle-age; well recommended; at liberty. Field, 4 Clifton Gardens, Cliftonville, Margate.

L OCUM Dispenser; Public Institution or Dispensary; experienced; qualified; M.P.S.; disengaged after October 14. 242/35, Office of this Paper.

L OCUM; experienced; qualified; well recommended; reasonable terms. Address, Geenty, c/o 23 Ellers Road, Harehills Avenue, Leeds.

M ANAGER; qualified; 29; tall; 7 years' first-class experience manager, London, Country; at liberty when suited; sale of business reason for leaving. Wyse, 63 Farnborough Road, Farnborough, Hants.

M ANAGER; qualified; 28; sound references; experienced every department; permanency; keen Salesman and Window-dresser; London or near. "Chemist," 10a Clarendon Road, Harrow, Middlesex.

M ANAGERSHIP; temporary or permanent; qualified; good references; abstainer. "M. W.," 25 Litchfield Road, Sutton, Surrey.

M.P.S., age 24 years, requires situation, Manager or Assistant; good all-round experience, including Photography. Cattran, 104 Clapham Road, London, S.W.9.

M.P.S. (Square Student), conversant French, German, Italian, requires situation, London; now disengaged. 61 Victoria Park Road, E.9.

M.P.S., 24, desires position high-class Pharmacy; first-class Dispensing, Counter experience; excellent references. Weeks, 33 Barnardo Road, Exeter.

M.P.S., 28, seeks Managership, with responsibility, of good-class business in London area where there is scope for man with experience and integrity; present post 4 years large West-End Family business; free one month from engagement. 244/6, Office of this Paper.

P ART-TIME or Locum; qualified; 35; tall; West-End experience; London area. 5 Cullington Road, W.13. Ealing 3122.

P HARMACIST, 22, requires post; Brighton or district preferred; free October 6. "K. H. S.," 5 Southdown Road, Brighton.

P HARMACIST, elderly, prepared to undertake emergency, part-time or Locum duty; N. or N.W. London preferred; moderate salary. "B.," 114 High Road, East Finchley, N.2.

Q UALIFIED; disengaged October 4; experienced; middle-aged; abstainer; Scotch; town or country management. "Pharmacist," 39 Argyle Gardens, Upminster.

Q UALIFIED, age 23, requires position, S.W. or W. districts; Dispensing, Counter and Photography; first-class London references; studying Optics, would prefer chance of optical experience. 241/24, Office of this Paper.

Q UALIFIED seeks change as Branch Manager or Assistant; 7 years' thorough all-round experience in high-class West-End and provincial pharmacies; age 23; tall and of good address. "Four," 13 Octavia Street, Battersea, S.W.11.

Q UALIFIED lady, 10 years' experience, Surgery, Retail, Hospital, seeks permanency. M. A. Walker, 256 Marton Road, Middlesbrough, Yorks.

Q UALIFIED; London preferred; age 23; Retail, Locum or permanency; Wholesale, Laboratory. Bowen, 412 Edgware Road, London, W.2.

Q UALIFIED Pharmacist, 25, 7 years' experience in high-class Pharmacy and Photographic, desires position as Assistant or Branch Manager; disengaged from 29th inst. J. Dodds, c/o F. A. Holland, Chemist, Macclesfield.

Q UALIFIED lady, 23, desires position in London; good all-round experience, Dispensing and Counter; disengaged October 4. 241/4, Office of this Paper.

Q UALIFIED; highly experienced; disengaged; London area. C. Adam, 31 The Vineyard, Richmond, Surrey.

Q UALIFIED Chemist, age 24, experienced in all branches, seeks post; excellent references; free October 6. Carrington, Longmeadow, Bakewell.

Q UALIFIED, 21, desires situation in good-class Dispensing business; good experience, Counter, Dispensing (Private and N.H.I.). E. C. Haskins, 4 Cynthia Road, Bath.

Q UALIFIED Chemist requires position as Locum or Manager; previous experience as Manager. R. Stephenson, Pontnewynydd.

Q UALIFIED; Manager; 29; experienced modern pharmacy; London, Bedfordshire or Hertfordshire; sound references. "Chemist," 58 Oakfield Road, London, N.4.

Q UALIFIED; lady; quick and accurate Dispenser; all-round Counter experience; excellent references; Birmingham or district preferred. 243/11, Office of this Paper.

Q UALIFIED, unmarried, 46, finishing season's locum, requires similar job or another permanency (5 years last); highest London references. 243/14, Office of this Paper.

Q UALIFIED, thoroughly experienced (London and West-End), requires post as Manager or responsible position in London; West-End preferred. 244/12, Office of this Paper.

S ITUATION, Manager; York district preferred; 10 years' last service; good reference; or Locum. Whitehouse, 4 Dryden Street, Nottingham.

S MART, unqualified Assistant, 24, disengaged, requires position; Dispensing, Photography, Window-dressing, etc. Taylor, 31 Cumberland Street, Cardiff.

U NQUALIFIED; age 27; good all-round experience, Dispensing, Counter; excellent references; temporary or permanent; now free. "W.," 99 Bishops Road, Fulham, S.W.6.

ADVERTISERS would consider the PURCHASE OF GOODWILL, etc., of any PATENT MEDICINE or PROPRIETARY ARTICLE—or ARRANGE for its MANUFACTURE and DISTRIBUTION.

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UNQUALIFIED; age 44; Locum, temporary, etc.; West-End experience; all-round knowledge. Little, 9 Westbourne Street, Sloane Square, S.W.1.

UNQUALIFIED Assistant desires post; age 21; 6 years' good all-round experience; capable Dispenser, Salesman and Window-dresser; excellent references; disengaged. Mares, 25 Sinderland Road, Broadheath, Altrincham, Cheshire.

UNQUALIFIED Assistant (20), disengaged, desires post as Dispenser; 4½ years' experience; interview if required. Howard, 26 St. Mary's Street, Bridgnorth.

UNQUALIFIED Assistant; age 21; tall; free October 4; well up in Dispensing and Counter. 243/230, Office of this Paper.

UNQUALIFIED; age 24; 8 years' experience; high-class Counter and Dispensing, etc.; London preferred; disengaged October 20. 243/4, Office of this Paper.

UNQUALIFIED; 6 ft. 2 in.; Scotch; smart appearance; super Salesman and Window-dresser; 3 years' West-End experience; available mid-October; West-End preferred; references, etc. "Diligent," 177/287, Office of this Paper.

WANTED, by Pharmacist, position; elderly; salary moderate; active; qualified. "X," 23 Lower Villiers Street, Wolverhampton.

YORKSHIRE PREFERRED.—Unqualified Assistant, 28, desires permanency; first-class Dispenser, Counterman, Window-dresser; 11 years' experience. 243/20, Office of this Paper.

YOUNG lady, 21 (Hall), desires post with Chemist or Doctor; York Norwich district preferred. Mourant, Summerhill Villa, Samars, Jersey.

£3.—**QUALIFIED**; elderly; moderate hours; highest references; personal interview given London or within 60 miles. 244/18, Office of this Paper.

WHOLESALE.

A.A.A.—**TRAVELLER**, at present engaged with large firm in London and Middlesex area, desires change; good address, tall, and smart appearance. P.C.B. 84/29, Office of this Paper.

EXPERT Salesman, 10 years' experience Drug trade, desires to represent leading Druggists; excellent references; own car. P.C.B. 85/6, Office of this Paper.

FOREWOMAN seeks position Packed Goods Department, Patent Medicines, Perfumery, etc.; London or Provinces. "Ret.," 51 Hargrave Mansions, Highgate.

FULLY qualified Chemist (England, Italy, Austria), 20 years' experience staff control, technical direction, office administration, management of works, complete knowledge Pharmaceutical Products, Toilet Articles, Wholesale Continental trade, excellent credentials, open to change from important firm to responsible position elsewhere. Write "J. F.," c/o Webster, British Chamber of Commerce, Via Manzoni 5, Milan.

IN Representative capacity, energetic man, wide experience, seeks post where hard work and integrity are rewarded with adequate remuneration and encouragement. "Rhei," 145 Columbus Ravine, Scarborough.

P.H.C., age 22, 4½ years' Retail experience, desires position in Laboratory. Moffat, 18 Glebe Crescent, Renfrew.

PHARMACIST, at present in business on own account, seeks progressive post with Manufacturer or Wholesaler where energy and industry will meet with just reward; indoors or outdoors. 238/6, Office of this Paper.

REPRESENTATIVE; disengaged; large connection London and environs with Chemists, Stores, Hairdressers; open for engagement by reputable known house. P.C.B. 85/28, Office of this Paper.

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M.P.S., F.B.O.A., age 25, married, desires position salary and prospects required. 244/3, Office of this Paper.

SCOT, qualified, requires situation; abroad preferred; well recommended. 241/22, Office of this Paper.

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CHEMISTS' FITTINGS.—We hold an immense stock of Drug Fittings, Dispensing Screens, Glass Fronted Counters, Perfumery Cases, Nests of Drawers, Wall Cases, Silent Salesmen, Upright and Flat Counter Cases, Plate-glass Counters, Cash Tills, Display Stands and Glass Shelves, etc., ready for immediate delivery at competitive prices. Write or call for List. F. MAUND & E. BERG (SHOWCASES), LTD., 175/9 and 336 Old Street, London, E.C.1.

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WANTED.

CINE KODAK and Kodascope, or separate. 241/29, Office of this Paper.

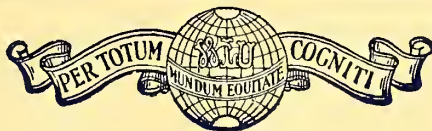
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